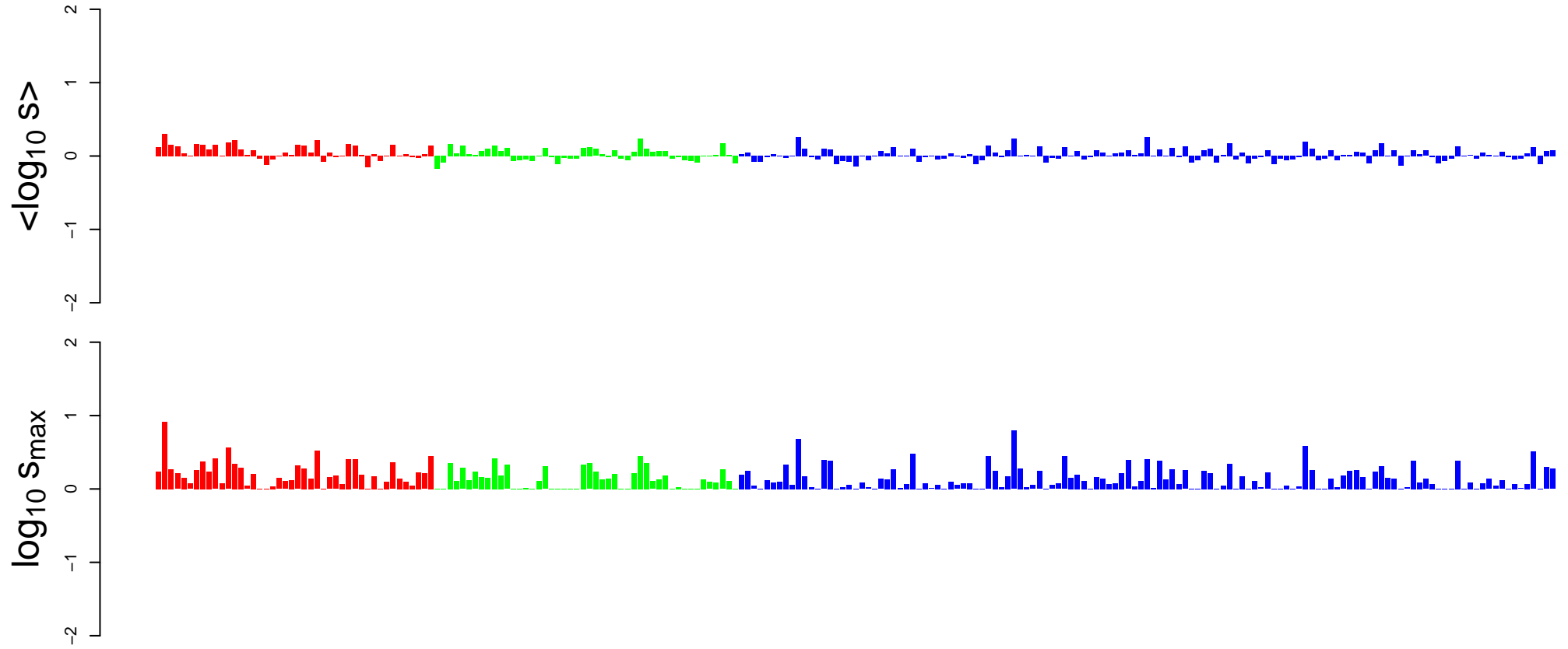
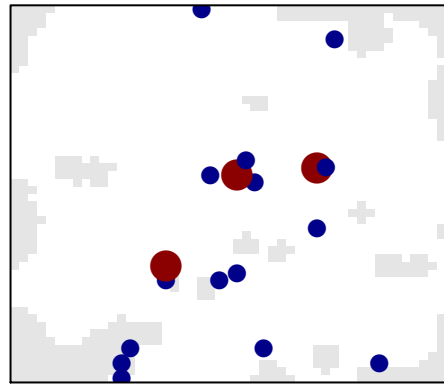
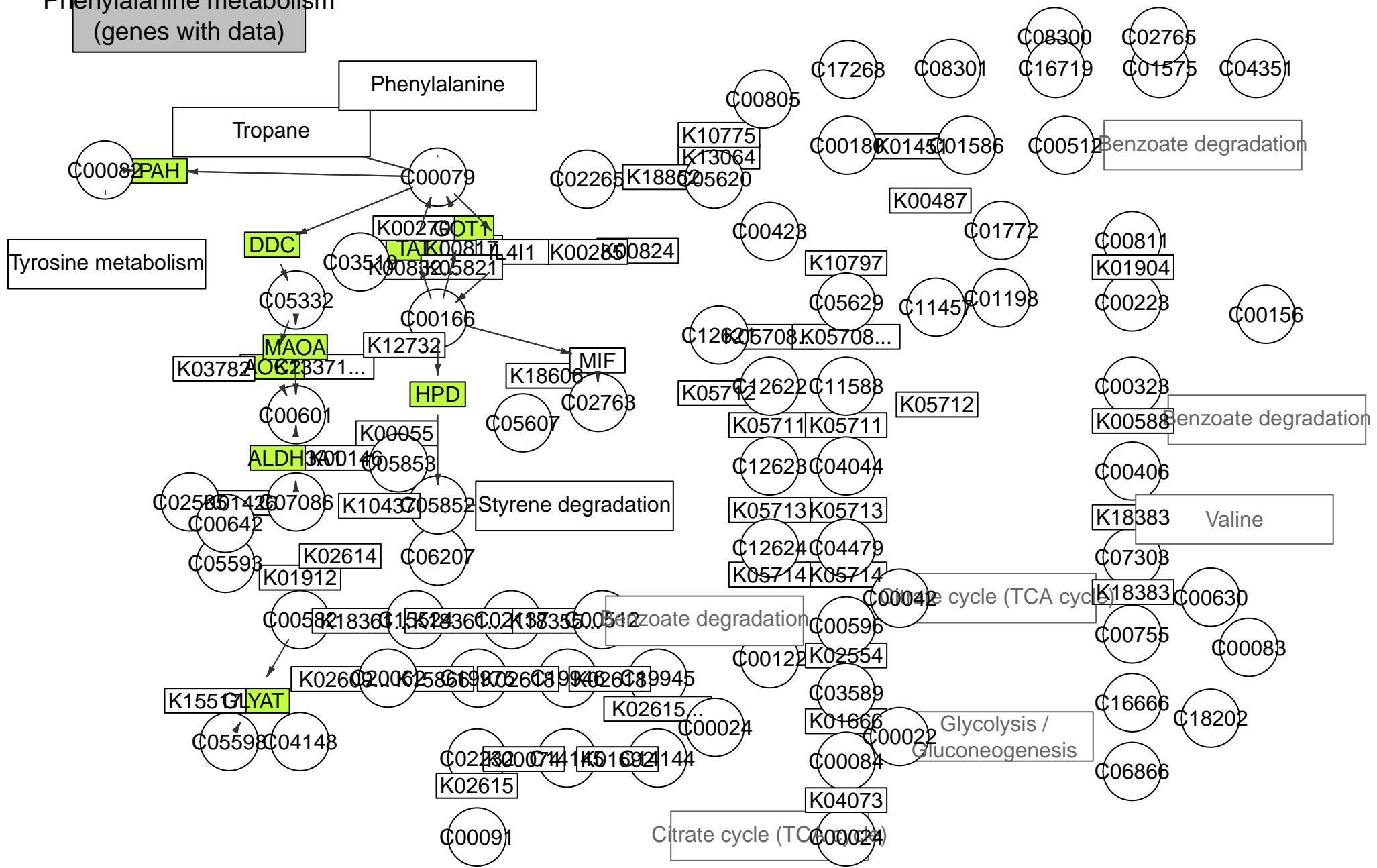


Phenylalanine metabolism

all genes



Phenylalanine metabolism
(genes with data)



Phenylalanine metabolism
MPI-003

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300
C16719

C02765
C01575

C04351

K10775
K13064

C00188

K01450
C01586

C00512

C05332

DDC

C03519

K00270
GOT1

K00817
TAK
K00830
K05821

K00280
K00824

C00423

K00487

C01772

C00811
K01904

MAOA

C05332

C00166

C00166

MIF

C02763

C12620

C05629

C11457

C01198

C00223

C00156

K03782
K023371...

C00601

K12732

HPD

K18606

C05607

C12622

C11588

K05712

C00323

K00588 Benzoate degradation

ALDH3

C00146

C05853

C05852

C05852

Styrene degradation

K05712

K05711
K05711

K05712

C00406

C02585
C05142
C00642

C07086

K10437

C05852

C06207

Styrene degradation

C12623

C04044

K05713
K05713

C00406

C05593

K02614

C06207

C06207

C06207

Styrene degradation

C12624

C04479

K05714
K05714

C07303

C00582

C18361

C15283

C18360

C02137

C18355

C00542

Benzoate degradation

C00042

Cycle (TCA cycle)

K18383

C00630

K155
GLYAT

C05593

C02062

C02062

C02062

C02062

C02062

C02062

C02062

C02062

C02062

C02062

C05593

C04143

C02062

C02062

C02062

C02062

C02062

C02062

C02062

C02062

C02062

C02062

C00091

Citrate cycle (TC

K04073

C00024

C03589

K01666

C00022

C00084

C16666

C18202

C06866

C00755

C00083

C07303

C00630

C00406

C00406

C00323

C00323

C00223

C00223

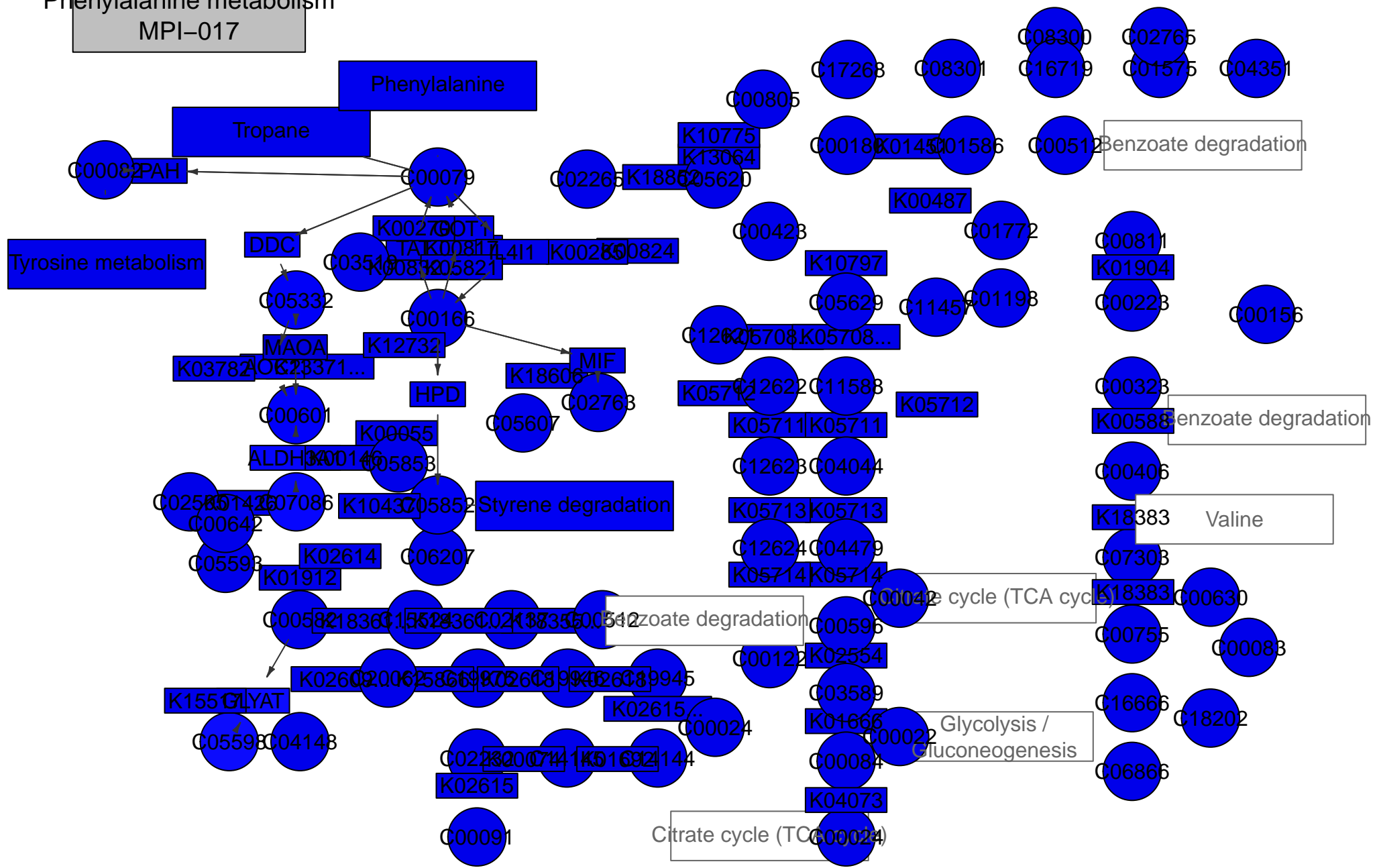
C00811

C00811

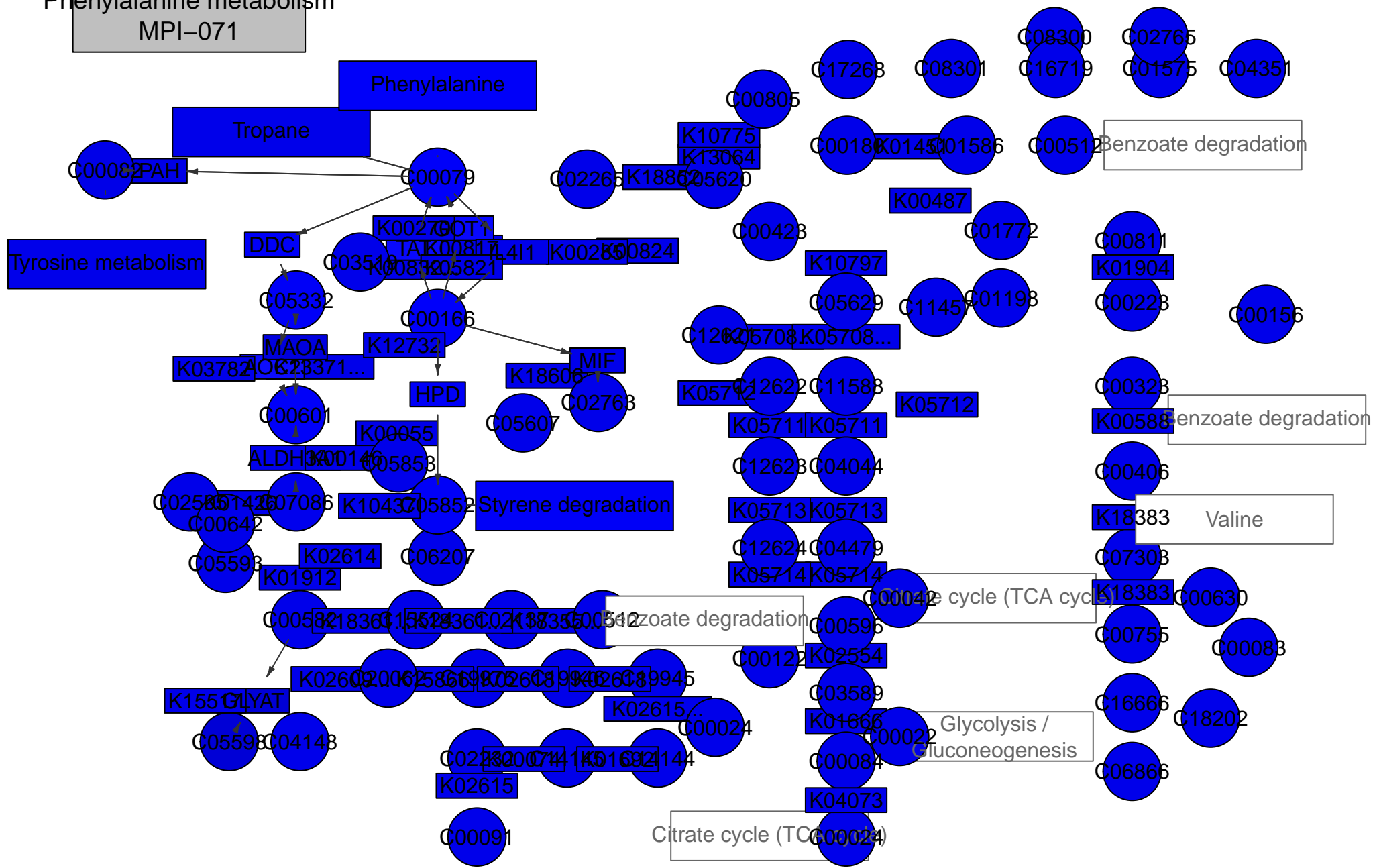
C00512

C00512

Phenylalanine metabolism
MPI-017



Phenylalanine metabolism
MPI-071



Phenylalanine metabolism
MPI-075

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

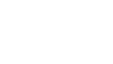
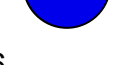
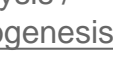
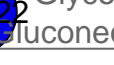
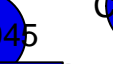
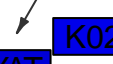
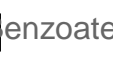
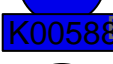
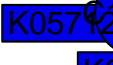
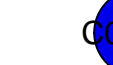
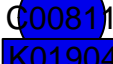
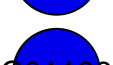
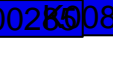
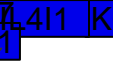
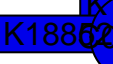
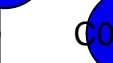
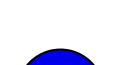
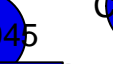
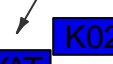
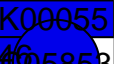
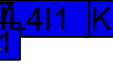
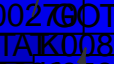
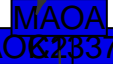
Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC



Phenylalanine metabolism
MPI-077

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

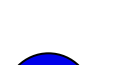
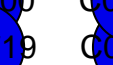
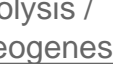
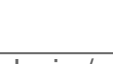
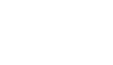
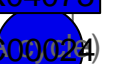
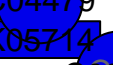
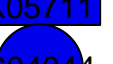
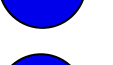
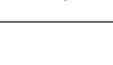
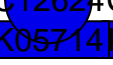
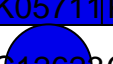
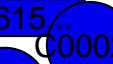
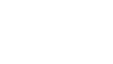
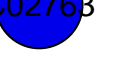
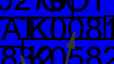
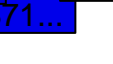
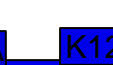
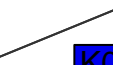
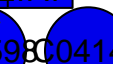
Benzoate degradation

Valine

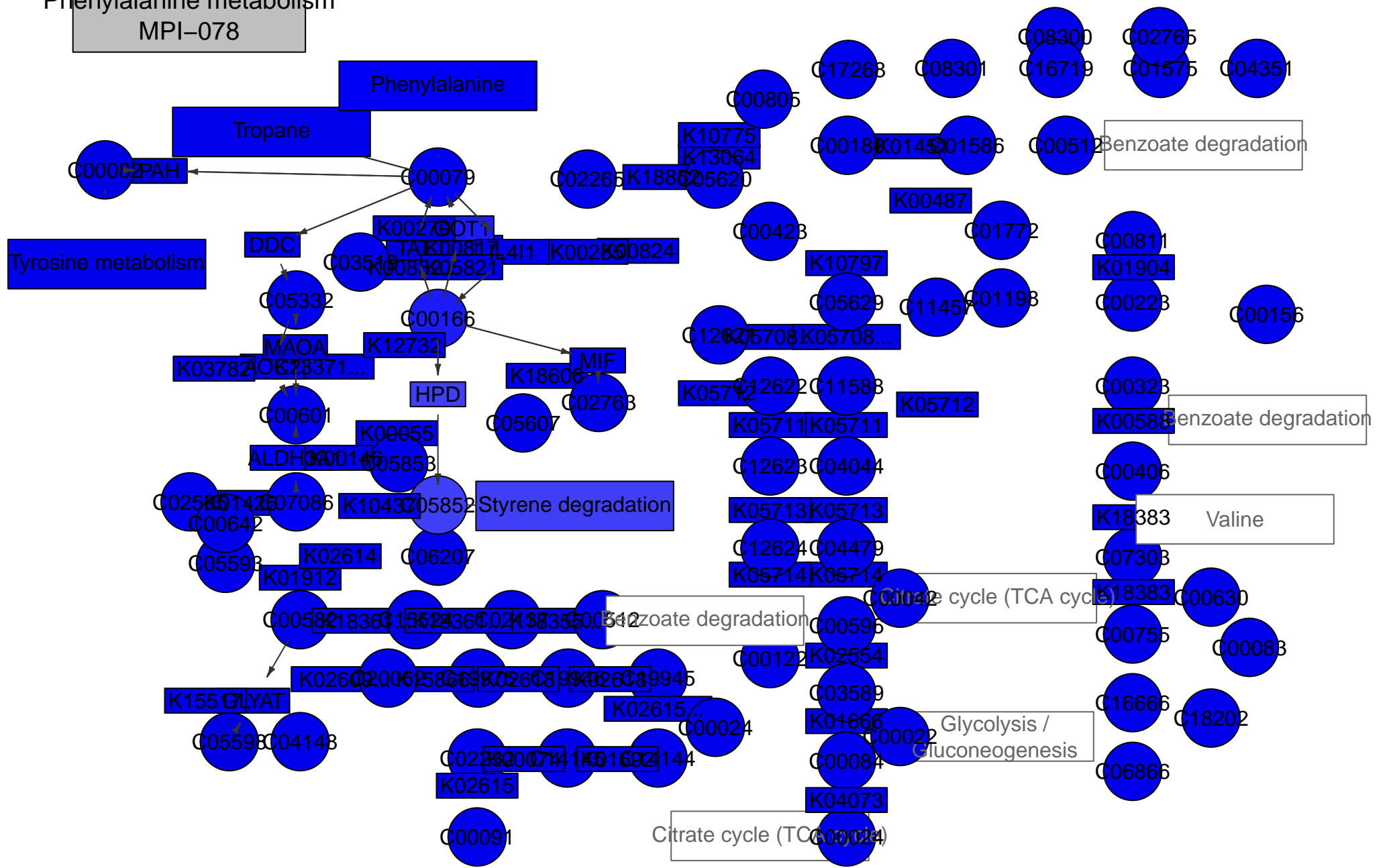
Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC



Phenylalanine metabolism
MPI-078



Phenylalanine

Tropine

Tyrosine metabolism

Benzoate degradation

Styrene degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TCA cycle)

Phenylalanine metabolism
MPI-079

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

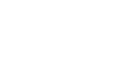
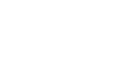
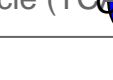
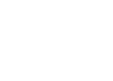
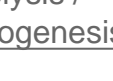
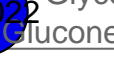
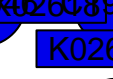
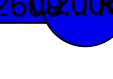
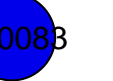
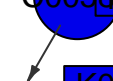
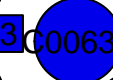
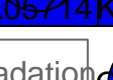
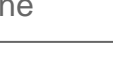
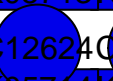
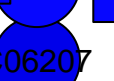
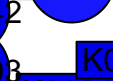
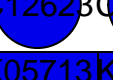
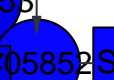
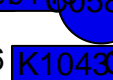
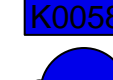
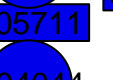
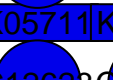
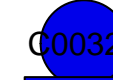
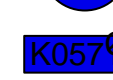
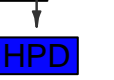
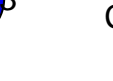
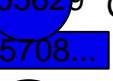
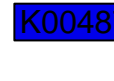
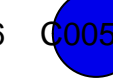
Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC



Phenylalanine metabolism
MPI-081

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300
C16719

C02765
C01575

C04351

K10775
K13064

C00188

K01450
C01586

C00512

C00082 PAH

DDC

C03519

K00270
K00817
K00830
K05821

TAK
K00817
K00830
K05821

K00280
K00824

C02265
K18860
C05620

C00188

K01450
C01586

C00512

K00487

C00423

C01772

C00811
K01904

C05332

C00166

C05629

C11457
C01198

C00223

C00156

MAOA
K03782
K023371...

C00601

K12732

HPD

MIF
K18606

C05607
C02763

C12620
C05708

K05708...

C11588

C00323

ALDH3
K00146

C00585

K00955

C05607

C02763

K05712

C12622

C11588

K05712

C00588

C02585
C05142
C00642

C07086

K10437

C05852

Styrene degradation

C06207

C12623

C04044

C00406

C05593

K02614

C06207

K01912

C00582

C18361

C15283

C02137

C03735

C00542

Benzoate degradation

C00042

Cycle (TCA cycle)

K155
GLYAT

C05593
C04148

K02602

C00062

C05369

K02603

C00024

K02603

C03589

K01666

C00022

C16666

C18202

C05593
C04148

K02602

C00062

C05369

K02603

C00024

K02603

C03589

K01666

C00022

C16666

C18202

C02280
C00744

K02615

C00074

K01692

C00144

C00084

K04073

C06866

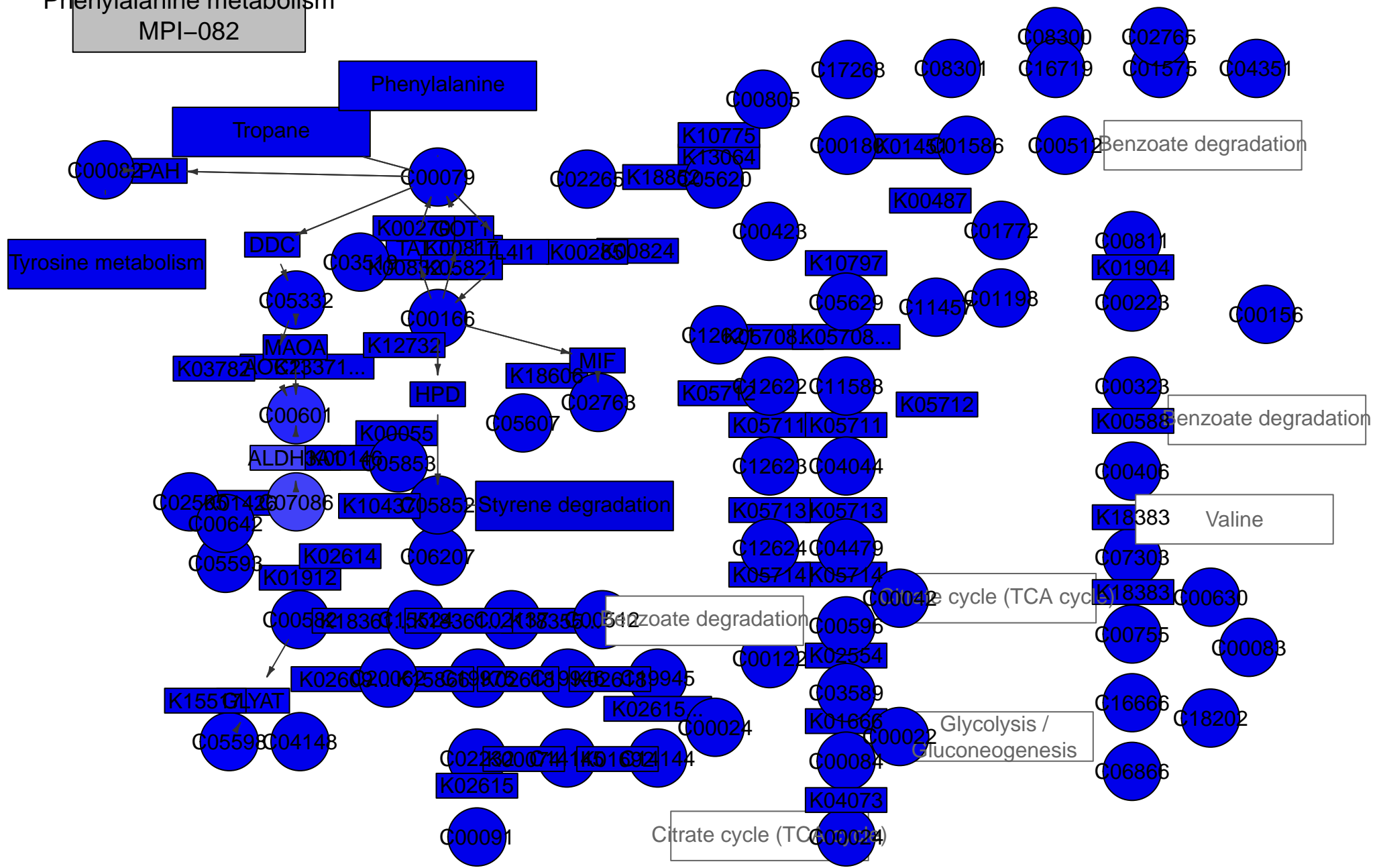
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Citrate cycle (TC

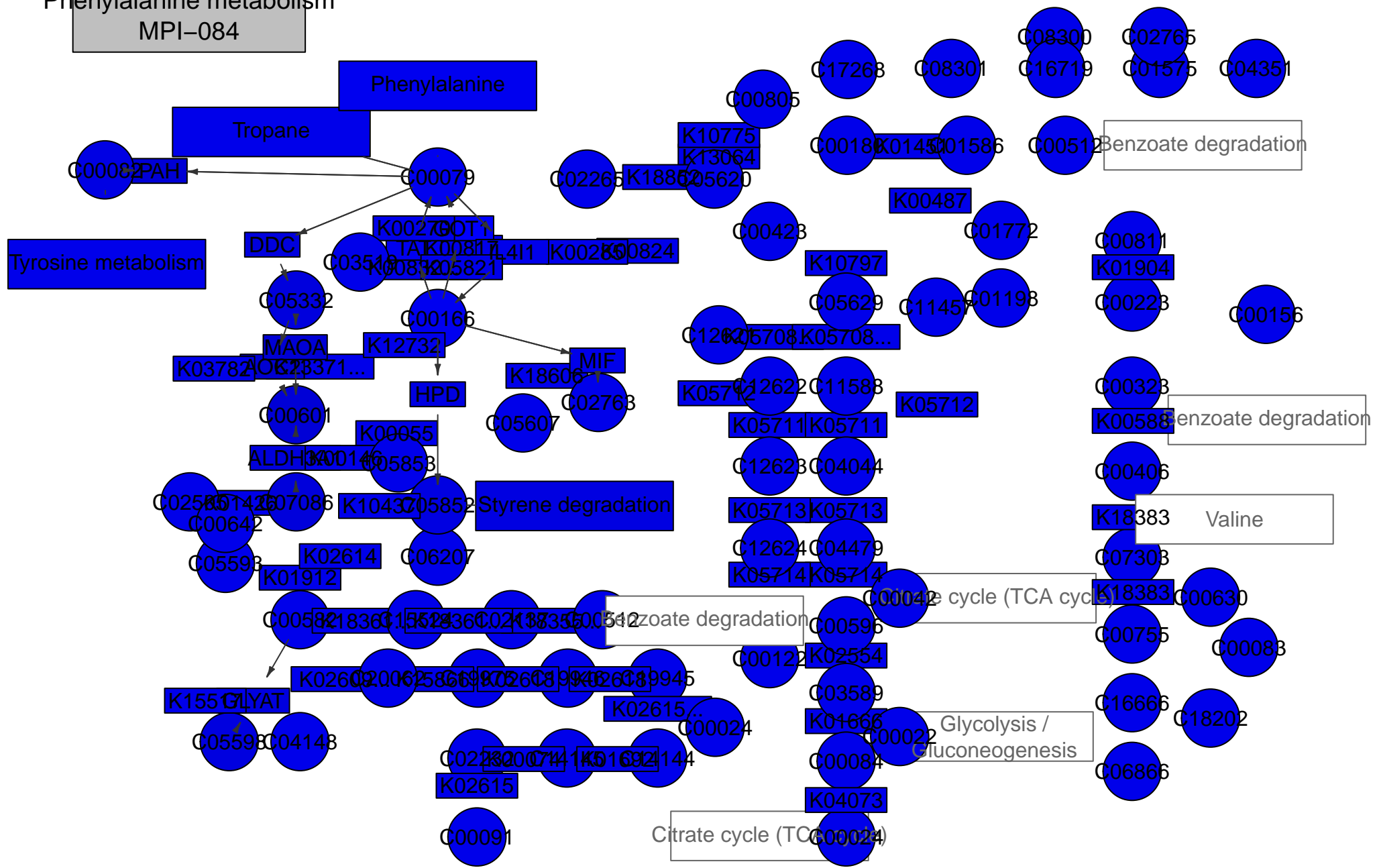
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C06866

Phenylalanine metabolism
MPI-082



Phenylalanine metabolism
MPI-084



Phenylalanine metabolism
MPI-085

Phenylalanine

Tropane

PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C01575

C04351

K10775
K13064

C00181

K01451

C01586

C00512

Benzoate degradation

DDC

C03519

K00270

C00817

K00817

C00423

K00487

C01772

C00811

Tyrosine metabolism

C05332

C00817

K00817

C00824

K10797

C05629

C11451

C00223

C00198

C00156

MAOA

C00166

K12732

MIF

C12622

C05708

K05708

C00323

K03782

K02337

C00601

HPD

K18606

C05607

C02763

K05712

C12622

C11588

K05711

K05711

K05712

Benzoate degradation

ALDH3

C00146

C05853

C05607

C12623

C04044

C00406

C02585

C05142

C07086

K10437

C05852

Styrene degradation

K05713

K05713

C00406

K18383

Valine

C05593

K02614

C06207

K01912

C06207

C12624

C04479

K05714

K05714

C07303

K18383

C00630

C00582

C18361

C15283

C02137

C03355

C00542

Benzoate degradation

C00042

Cycle (TCA cycle)

C00596

C00755

C00083

K155

C05598

C04143

K02602

C00062

C05369

K02603

C03589

C00024

K01666

C00022

Glycolysis / Gluconeogenesis

C16666

C18202

C05598

C04143

C02230

C00074

K01692

C00144

C00024

C00084

K04073

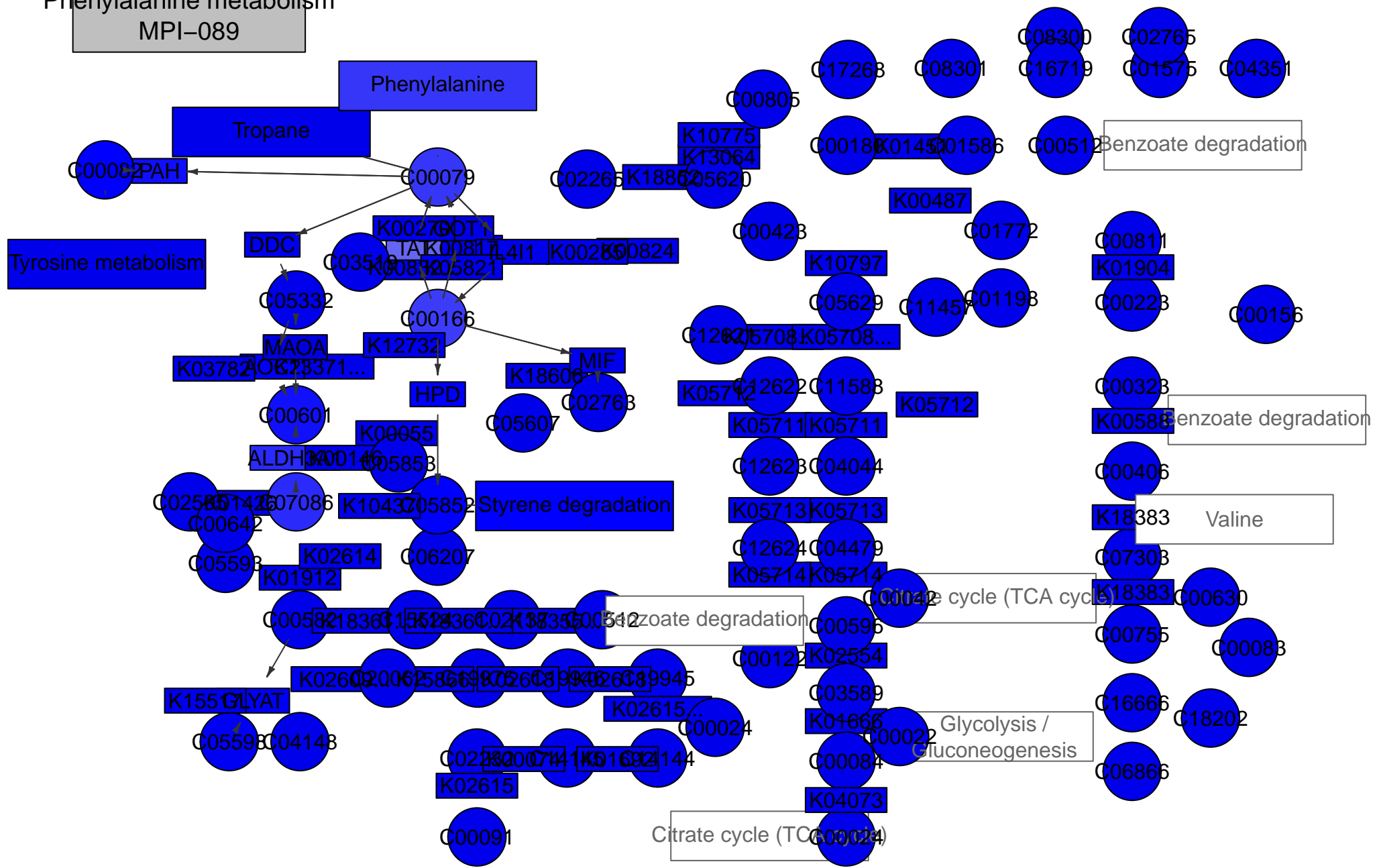
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C00091

Citrate cycle (TCA cycle)

C00024

Phenylalanine metabolism
MPI-089



Phenylalanine metabolism
MPI-091

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300
C16719

C02765
C01575

C04351

K10775
K13064

C00188

K01450
C01586

C00512

DDC

C05332

C03519

K00270
K00817
K00830
K05821

K00817
K00830
K00824

K00280
K00824

C00423

K00487

C01772

C00811
K01904

MAOA
K03782
K023371...

C00601

C00166

K12732

MIF

C05607

C12620

C05629

C11457

C01198

C00223

C00156

HPD

C00601

K00955

HPD

K18606

C05607

C02763

K05712

C12622

C11588

C00323

K00588

ALDH3
K00146

C00642

C05853

K10437

C05852

Styrene degradation

C12623

C04044

C00406

C02585
C05142

C07086

C00642

C05593

C06207

C06207

K05713

K05713

K18383

Valine

K01912

C00582

C01836

C01523

C02136

C01373

C00542

Benzoate degradation

C00042

Cycle (TCA cycle)

K18383

C00630

K155
GLYAT

C05593

C04143

K02602

C02062

C02366

C02603

C02603

C02603

C02603

C00596

C00755

C05593

C04143

C02230

C02074

K02615

C00024

C03589

K01666

C00022

C16666

C18202

K02615

C02230

C02074

K01692

C02144

C00084

K04073

C06866

C00091

Citrate cycle (TC

C00024

C00024

C06866

Phenylalanine metabolism
MPI-101

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

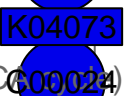
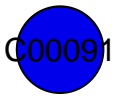
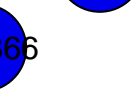
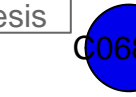
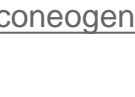
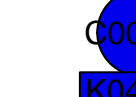
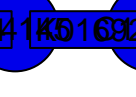
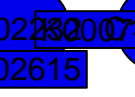
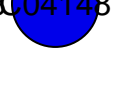
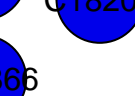
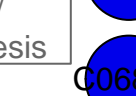
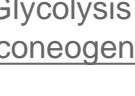
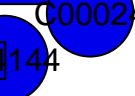
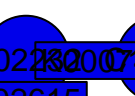
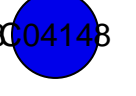
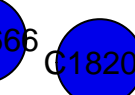
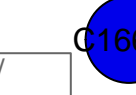
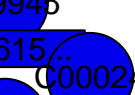
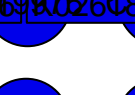
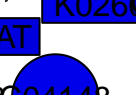
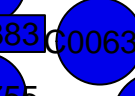
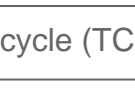
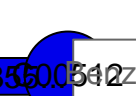
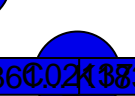
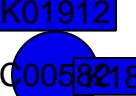
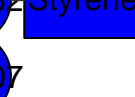
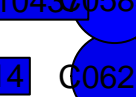
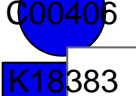
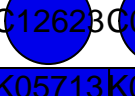
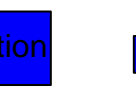
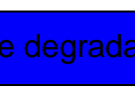
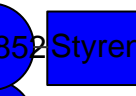
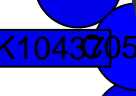
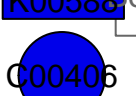
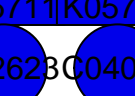
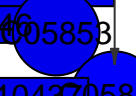
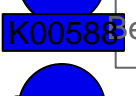
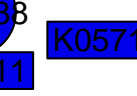
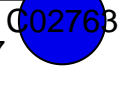
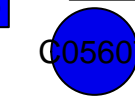
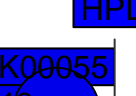
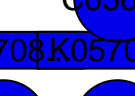
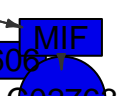
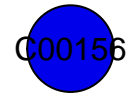
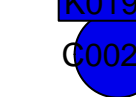
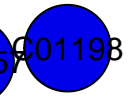
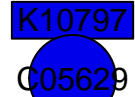
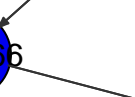
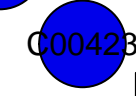
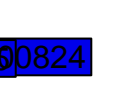
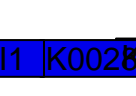
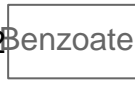
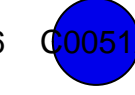
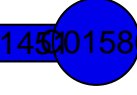
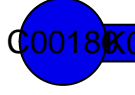
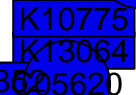
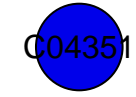
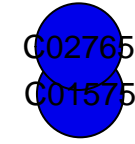
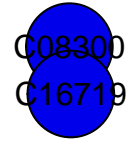
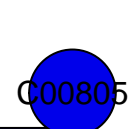
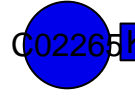
Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC



Phenylalanine metabolism
MPI-138

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

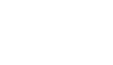
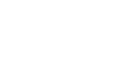
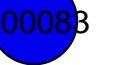
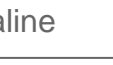
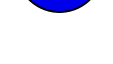
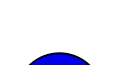
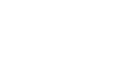
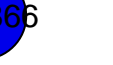
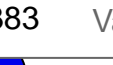
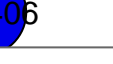
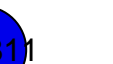
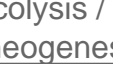
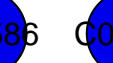
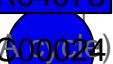
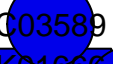
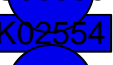
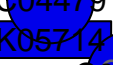
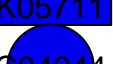
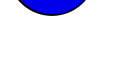
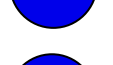
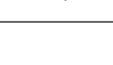
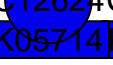
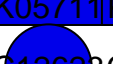
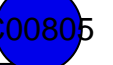
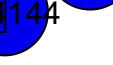
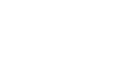
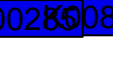
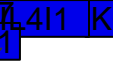
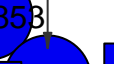
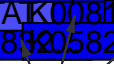
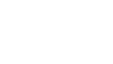
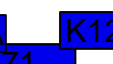
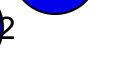
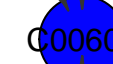
Benzoate degradation

Valine

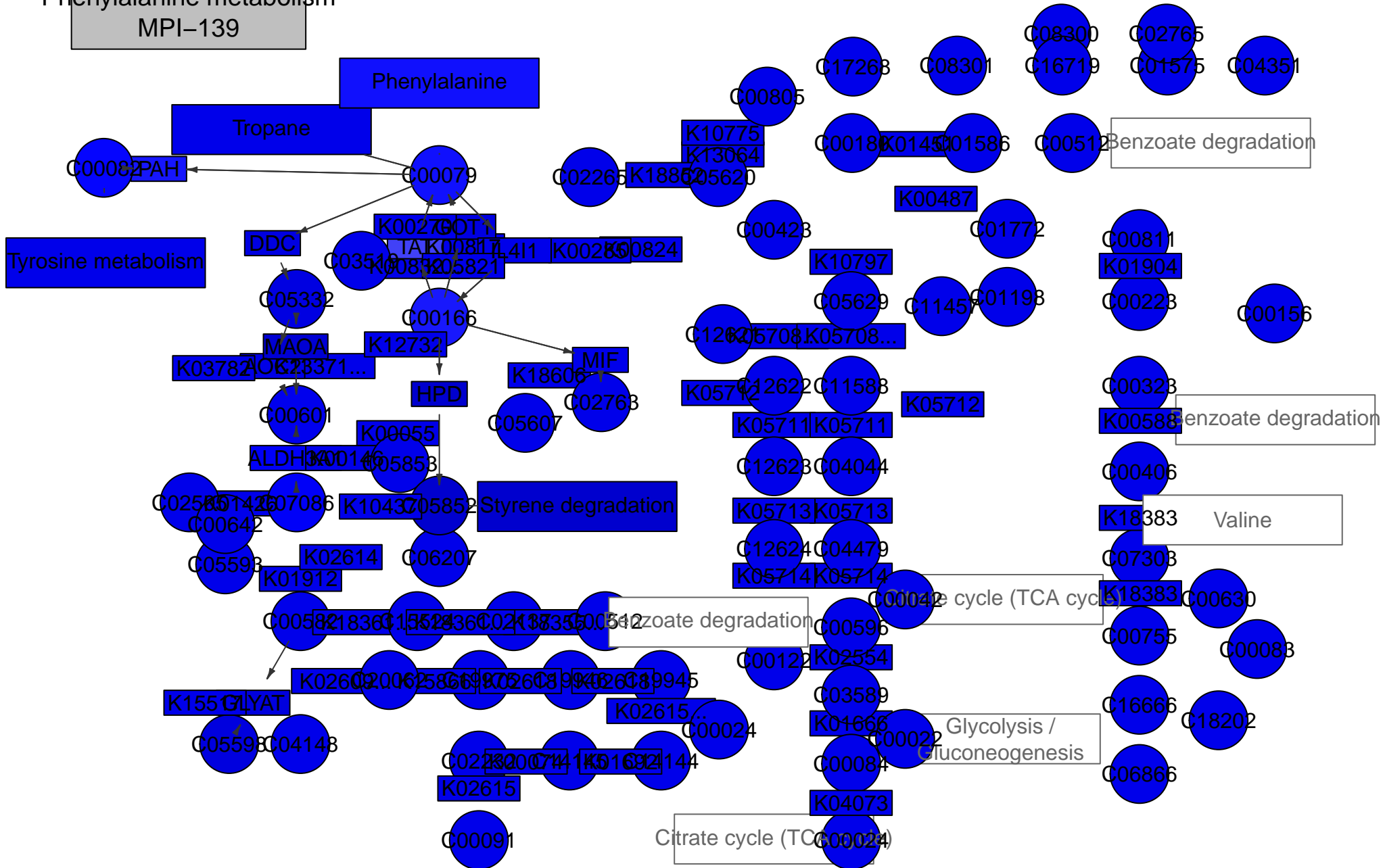
Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC



Phenylalanine metabolism
MPI-139



Phenylalanine metabolism
MPI-140

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C04351

C01575

C00512

C00181

C01450

C01586

K10775

K13064

K18860

C05620

K00487

C00423

C01772

C00811

K01904

DDC

C03519

K00270

K00817

K00817

K00280

K00824

K10797

C01198

C00223

C00156

C05332

C00166

C05629

C11457

MAOA

K03782

K02337

K12732

MIF

C12620

C05708

K05708

C00323

K03782

K02337

K18606

C02763

K05712

C12622

C11588

K05712

K00588

C00601

HPD

C05607

C02763

K05711

K05711

K05712

C00406

ALDH3

K00955

C00146

C05853

C05853

C12623

C04044

C00406

C02585

C05142

C07086

K10437

C05852

Styrene degradation

K05713

K05713

K18383

Valine

C00642

C05593

K02614

C06207

C06207

C06207

C12624

C04479

K05714

K05714

C07303

C00582

C18361

C15233

C02137

C03735

C00542

Benzoate degradation

C00596

C00042

Cycle (TCA cycle)

K18383

C00630

K155

C05598

C04143

K02602

C00062

C03669

K02603

C03995

K02603

C03995

C00755

C00083

C05598

C04143

C02230

C00074

K01692

C00024

K01666

C00022

C16666

C18202

C05598

C04143

C02230

C00074

K01692

C00024

C00084

K04073

C16666

C18202

C05598

C04143

C02230

C00074

K01692

C00024

C00024

C06866

C05598

C04143

C00091

C00024

C00024

C06866

Phenylalanine metabolism
MPI-007

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C04351

C01575

C00512

C00181

C01450

C01586

K10775

K13064

K18860

C05620

K00487

C00423

C01772

C00811

DDC

K00270

GOT1

K00817

L411

K00280

K00824

C03519

K00830

C05821

K10797

C00423

C05629

C11457

C01198

C00223

C00156

C05332

C00166

MIF

C12620

C05708

K05708

MAOA

K12732

HPD

K18606

C12622

C11588

C00323

K03782

K02337

C00601

C05607

C02763

K05712

K05712

K00588

ALDH3

K00955

C05853

K05711

K05711

C00406

C02585

C05142

C07086

C05852

Styrene degradation

C12623

C04044

K18383

Valine

C00642

C05593

K02614

C06207

K05713

K05713

C07303

C05593

K01912

C00582

C18361

C15233

C02137

C18355

C00542

C00042

Cycle (TCA cycle)

K18383

C00630

C00582

C18361

C15233

C02137

C18355

C00542

C00596

C00122

K02554

C00755

C00083

K155

C05593

C04143

C02062

C00625

C03669

C02608

C03995

C02608

C03995

C16666

C18202

K02602

C00625

C03669

C02608

C03995

C00024

C03589

K01666

C00022

C16666

C18202

C05593

C04143

C02062

C00625

C03669

C02608

C03995

C00084

C00022

C06866

C05593

C04143

C02062

C00625

C03669

C02608

C03995

C00084

C00022

C06866

C05593

C04143

C02062

C00625

C03669

C02608

C03995

C00024

K04073

C00024

C05593

C04143

C02062

C00625

C03669

C02608

C03995

C00024

K04073

C00024

C05593

C04143

C02062

C00625

C03669

C02608

C03995

C00024

K04073

C00024

Phenylalanine metabolism
MPI-041

Phenylalanine

Tropane

PAH

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Citrate cycle (TCA cycle)

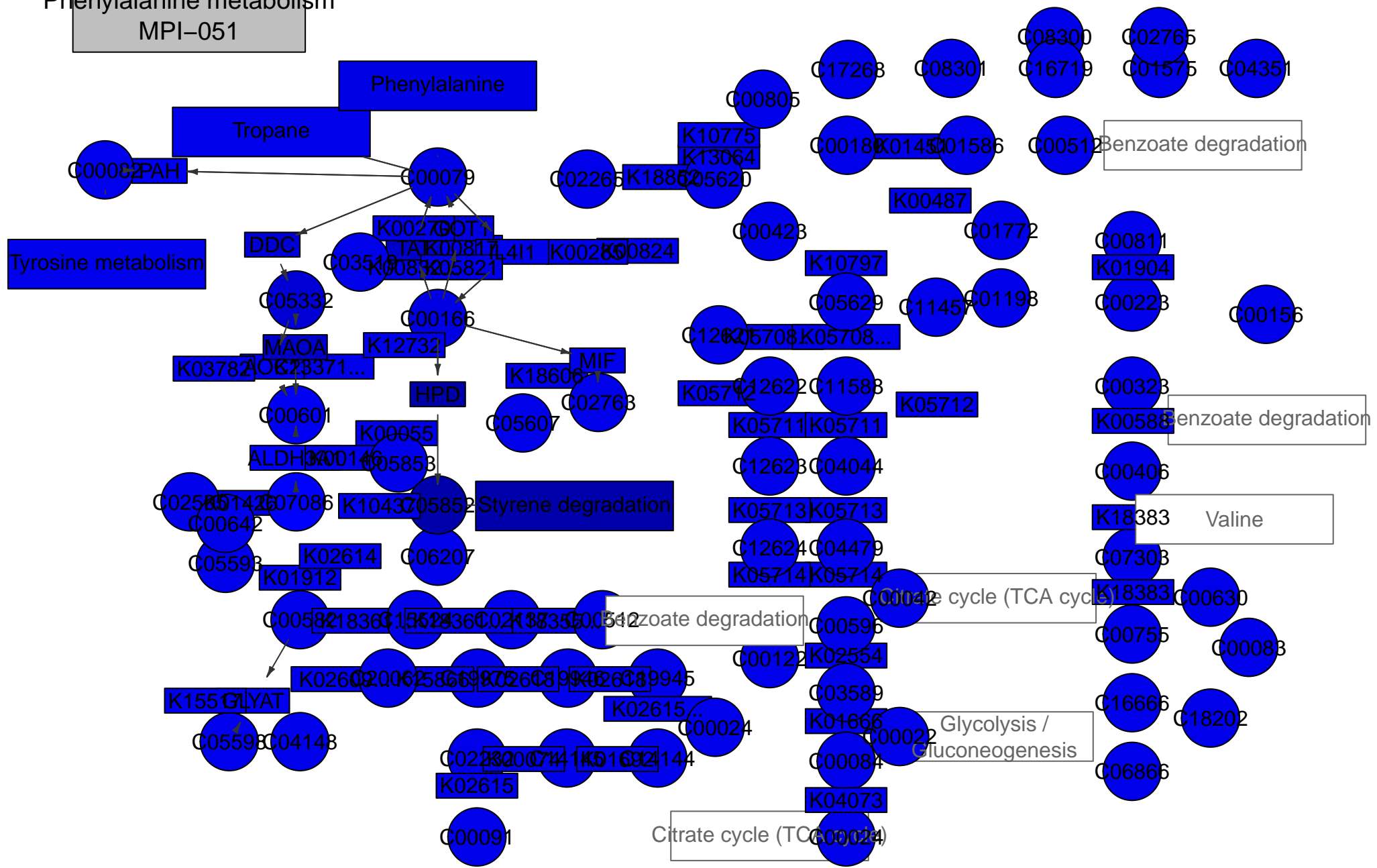
Glycolysis / Gluconeogenesis

Styrene degradation

Benzoate degradation

Citrate cycle (TCA cycle)

Phenylalanine metabolism
MPI-051



Phenylalanine metabolism
MPI-054

Phenylalanine

Tropane

Benzoate degradation

Tyrosine metabolism

Benzoate degradation

Styrene degradation

Valine

Benzoate degradation

Citrate cycle (TCA cycle)

Glycolysis / Gluconeogenesis

Citrate cycle (TCA cycle)

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C04351

C16719

C01575

C00082

C00079

C03519

C00817

C00824

C02265

K10775

K13064

K00184

K01450

K01586

K00512

DDC

C05332

C03519

K00270

K00817

K00280

C00423

K10797

C01772

C01198

C00811

K01904

C00223

C00156

MAOA

C05332

C00166

K12732

MIF

C05607

C12622

C11588

K05708

C11457

C00323

K00588

K03782

C00601

K00955

HPD

C05607

C02763

K05712

K05711

K05711

K05712

C00406

K00588

ALDH3

C00601

C00146

C05853

C05607

C02763

C12623

C04044

K05713

K05713

C00406

K18383

C02585

C05142

C07086

K10437

C05852

C06207

K05713

K05713

C12624

C04479

K05714

K05714

C07303

C00642

C05593

K02614

C06207

C06207

K01912

C12624

C04479

K05714

K05714

C00442

C00442

C00630

C00582

C18363

C15283

C02137

C03735

C00542

C00596

C00042

C00042

C00596

C00755

C00083

K155

C05593

C04143

K02602

C02062

C05369

K02603

C03589

K01666

C00022

C16666

C18202

C05593

C04143

C02062

C05369

K02603

C03589

C00024

K01666

C00084

C00022

C16666

C18202

C05593

C04143

C02062

C05369

K02603

C03589

C00024

K01666

C00084

C00022

C16666

C18202

C05593

C04143

C02062

C05369

K02603

C03589

C00024

K01666

C00084

C00022

C16666

C18202

C05593

C04143

C02062

C05369

K02603

C03589

C00024

K01666

C00084

C00022

C16666

C18202

C05593

C04143

C02062

C05369

K02603

C03589

C00024

K01666

C00084

C00022

C16666

C18202

C00082

C00079

C03519

C00817

C00824

C02265

K10775

K13064

K00184

K01450

K01586

K00512

DDC

C05332

C03519

K00270

K00817

K00280

C00423

K10797

C01772

C01198

C00811

K01904

C00223

C00156

MAOA

C05332

C00166

K12732

MIF

C05607

C12622

C11588

K05708

C11457

C00323

K00588

K03782

C00601

K00955

HPD

C05607

C02763

K05712

K05711

K05711

K05712

C00406

K00588

ALDH3

C00601

C00146

C05853

C05607

C02763

C12623

C04044

K05713

K05713

C00406

K18383

C02585

C05142

C07086

K10437

C05852

C06207

K05713

K05713

C12624

C04479

K05714

K05714

C07303

C00642

C05593

K02614

C06207

C06207

K01912

C12624

C04479

K05714

K05714

C00442

C00442

C00630

C00582

C18363

C15283

C02137

C03735

C00542

C00596

C00042

C00042

C00596

C00755

C00083

K155

C05593

C04143

K02602

C02062

C05369

K02603

C03589

K01666

C00022

C16666

C18202

C05593

C04143

C02062

C05369

K02603

C03589

C00024

K01666

C00084

C00022

C16666

C18202

C05593

C04143

C02062

C05369

K02603

C03589

C00024

Phenylalanine metabolism
MPI-059

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

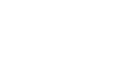
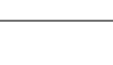
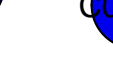
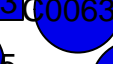
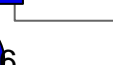
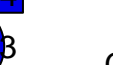
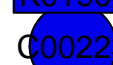
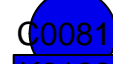
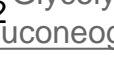
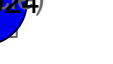
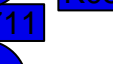
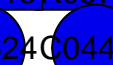
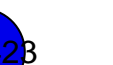
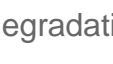
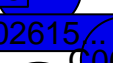
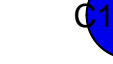
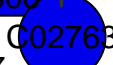
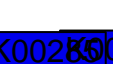
Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC



Phenylalanine metabolism
MPI-060

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300
C16719

C02765
C01575

C04351

K10775
K13064

C00188

K01450
C01586

C00512

Tropane

K00270
GOT1

K00817
TAK
K00830
K05821

K00280
K00824

C00423

K00487

C01772

C00811
K01904

DDC

C05332

C03519

C00166

K10797

C05629
C11457
C01198

C00223

C00156

MAOA

K12732

K03782
K023371...

MIF

C12620
C05708...

C05629

C11457

C00323

K03782
K023371...

C00601

K00955

K18606

MIF

C12622
C05712

C11588

K05712

K00588

ALDH3

K00146

K05853

C05607

C02763

K05712

C12622
C11588

K05711
K05711

K00588

C02585
C051426
C00642

C07086

K10437

C05852

C06207

Styrene degradation

C12623

C04044

C00406

C05593

K02614

K01912

C06207

C00592

C18361

K05713
K05713

C12624
C04479

K05714
K05714

C07303

K155
GLYAT

C05593
C04143

K02602

C02062

C05369

K02603
K02603

C00024

C03589

K01666

C00022

C16666

C18202

C00592

C18361

C152336

C0213735

C00542

Benzoate degradation

C00596

C00042

Cycle (TCA cycle)

K18383

C00630

K02602

C02062

C05369

K02603

K02603

C00024

C03589

K01666

C00022

C16666

C18202

C05593
C04143

K02602

C02062

C05369

K02603

C00024

C03589

K01666

C00022

C16666

C18202

K02615

C02230074

K01692

C00024

C00084

K04073

C06866

C00091

Citrate cycle (TC

C00024

Phenylalanine metabolism
MPI-061

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300
C16719

C02765
C01575

C04351

K10775
K13064

C00188
K01450

C01586

C00512

K18860
C05620

K00487

C00423

C01772

C00811

DDC

C03519

K00270
GOT1
K00817
L411
K00280
K00824

K10797

K01904

C05332

C00166

C05629

C11457

C01198

C00223

C00156

MAOA
K03782
K023371...

C00601

K12732

HPD

MIF
K18606

C05607

C12620
C05708
K05708...

C12622

C11588

C00323

K00955

ALDH3
K00146

C05853

C06207

C02763

K05712

C12623

C04044

K05712

K00588

C02585
C05142
C00642

C07086

K10437

C05852

Styrene degradation

C06207

K05713
K05713

C12624

C04479

K05714
K05714

C00406

C05593

K02614

C06207

K01912

C00592

C18361

C15283
C02137
C03505

C00542

Benzoate degradation

C00042
C0042 cycle (TCA cycle)

K18383

C00630

K155
GLYAT

C05598

C04143

K02602

C02062

C05369

K02603

C03589

K01666

C00022

Glycolysis /
Gluconeogenesis

C16666

C18202

C05598

C04143

C02062

C05369

K02603

C03589

K01666

C00022

C00084

C06866

C02280
C00744

K02615

K01692

C00024

K04073

C00024

C06866

C00091

Citrate cycle (TC

C00024

Phenylalanine metabolism
MPI-064

Phenylalanine

Tropane

PAH

Tyrosine metabolism

DDC

GOT1

TAK

MAOA

K12732

MIF

HPD

K18606

C00601

K00955

ALDH3

K00146

Styrene degradation

C02585

C05142

C07086

C05852

C00642

C05593

C02614

C06207

C00582

C01836

C01528

C02336

C02137

C03350

C00542

K155 GLYAT

C02602

C00062

C02536

C02603

C02608

C02608

C02608

C02608

C05593

C04143

K02615

C02230

C00074

K01692

C02144

Citrate cycle (TC

C00091

C00805

C17268

C08301

C16719

C08300

C02765

C01575

C04351

K10775

K13064

C00188

K01450

C001586

C00512

Benzoate degradation

C02265

K18860

C05620

K00487

C00423

C01772

C00811

K01904

K10797

C05629

C11457

C01198

C00223

C00156

C12620

C05708

K05708

C00323

K00588

Benzoate degradation

K05712

C12622

C11588

K05712

C00406

K18383

Valine

C12623

C04044

K05713

K05713

C12624

C04479

K05714

K05714

C07303

K18383

C00630

C00596

C00122

K02554

C00596

C00122

K02554

C00596

C00042

Citrate cycle (TCA cycle)

C00630

C00755

C00083

C03589

K01666

C00022

Glycolysis / Gluconeogenesis

C16666

C18202

C00084

C00022

C00022

C06866

K04073

C00024

C00024

C06866

Phenylalanine metabolism
MPI-093

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

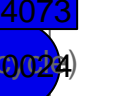
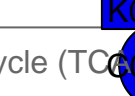
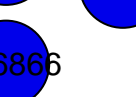
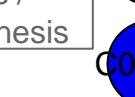
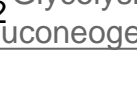
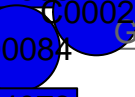
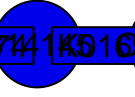
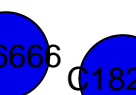
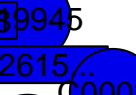
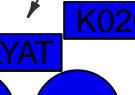
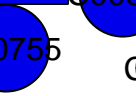
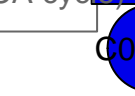
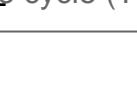
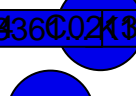
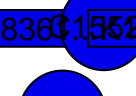
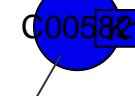
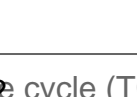
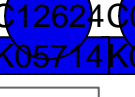
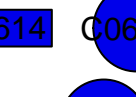
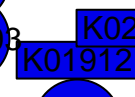
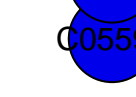
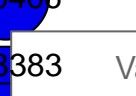
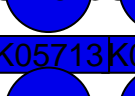
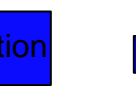
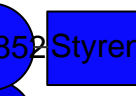
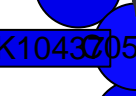
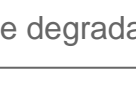
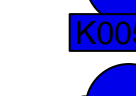
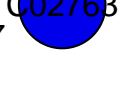
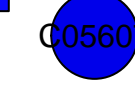
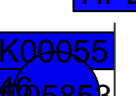
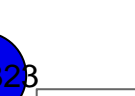
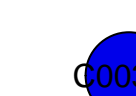
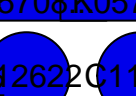
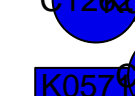
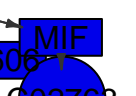
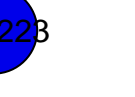
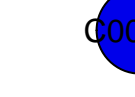
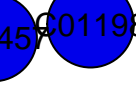
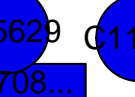
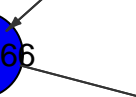
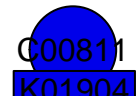
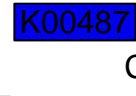
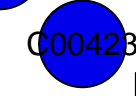
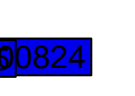
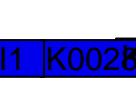
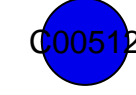
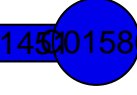
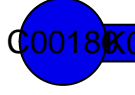
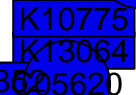
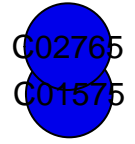
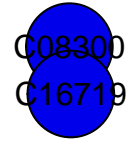
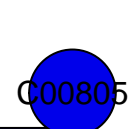
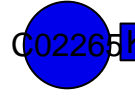
Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC



Phenylalanine metabolism
MPI-099

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300
C16719

C02765
C01575

C04351

K10775
K13064

C00188

K01450
C01586

C00512

K00487

C00423

C01772

C00811
K01904

DDC

C03519

K00270
K00817
K07411
K00280
K00824

K10797

C05629

C11457

C01198

C00223

C00156

C05332

C00166

MIF

C12620

C05708

C11588

C00323

MAOA

K03782
K023371...

K12732

HPD

K18606

C05607

C02763

K05712

K05712

K00588

C00601

K00955

C05607

C02763

C05607

K05711
K05711

C12623

C04044

C00406

C02585
C05142
C00642

C07086

K10437

C05852

C05852

Styrene degradation

K05713
K05713

C12623

C04044

K18383

Valine

C05593

K02614

C06207

C06207

C06207

C06207

C12624

C04479

K05714
K05714

C07303

K18383

C00630

C00582

C18361

C15283

C02137

C03735

C00542

Benzoate degradation

C00042

Cycle (TCA cycle)

C00596

C00755

C00083

K155
GLYAT

C05593

C04143

K02602

C00162

C05369

K02603

C03589

K01666

C00022

Glycolysis /
Gluconeogenesis

C16666

C18202

C05593

C04143

C02280

C00074

K01692

C00024

C00084

C00022

Glycolysis /
Gluconeogenesis

C00084

C06866

K02615

C02280

C00074

K01692

C00024

K04073

C00024

C06866

C00091

Citrate cycle (TC

Phenylalanine metabolism
MPI-107

Phenylalanine

Tropane

PAH

Tyrosine metabolism

DDC

GOT1

TAKO0817411

C05332

C00166

MAOA

K12732

MIF

K03782

C00601

HPD

C05607

ALDH3

K00955

C02763

C02585

C05142

K10437

Styrene degradation

C00642

C07086

K10437

C06207

C05593

K02614

K10437

C00582

C18361

C15283

C02137

C18355

C00542

Benzoate degradation

K155

GLYAT

C05593

C04143

K02602

C00162

C00162

C00162

C00162

C00162

C00162

C00162

C00162

C00162

C00162

C00162

C02280

C00074

K01692

C00144

C00024

C03589

K01666

C00022

C00084

C16666

C18202

C06866

C02280

C00074

K01692

C00144

C00024

C00084

C00022

C16666

C18202

C06866

K02615

C00091

C00091

C00091

C00091

C00091

C00091

C00091

C00091

C00091

Citrate cycle (TCA cycle)

C17268

C08301

C16719

C08300

C02765

C01575

C04351

C00805

K10775

K13064

C00188

K01450

C001586

C00512

Benzoate degradation

C02265

K18860

C05620

K00487

C00423

C01772

C00811

K01904

K10797

C05629

C11457

C01198

C00223

C00156

C12620

C05708

K05708

C00323

K00588

Benzoate degradation

K05712

C12622

C11588

K05712

C00406

K18383

Valine

K05711

K05711

C12623

C04044

K05713

K05713

C07303

K18383

C00630

C12624

C04479

K05714

K05714

Citrate cycle (TCA cycle)

C00596

C00755

C00083

C00122

K02554

C03589

K01666

C00022

Glycolysis / Gluconeogenesis

C16666

C18202

C00091

C00091

C00091

C00091

C00091

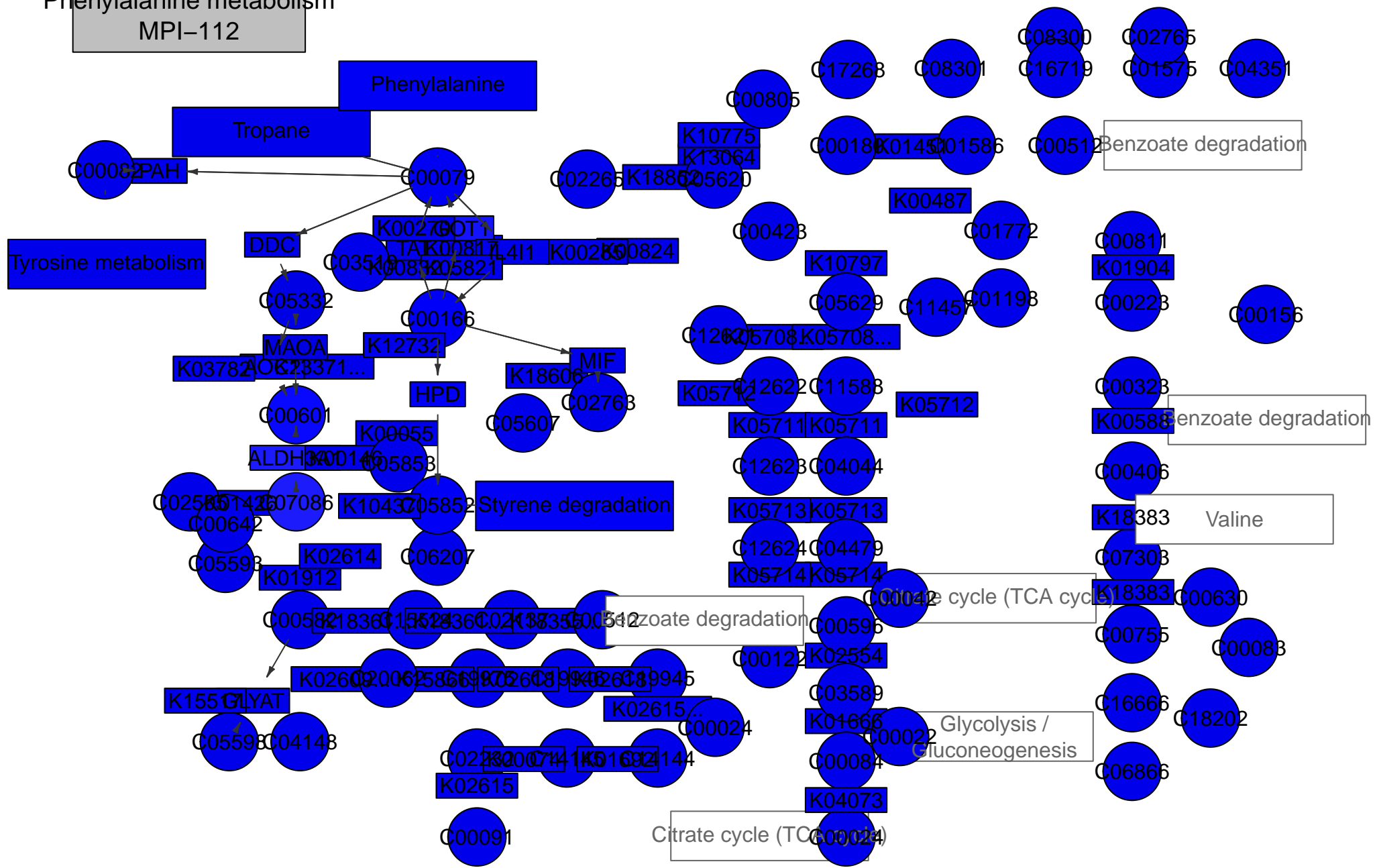
C00091

C00091

C00091

C00091

Phenylalanine metabolism
MPI-112



Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis / Gluconeogenesis

Citrate cycle (TCA cycle)

Styrene degradation

Phenylalanine metabolism
MPI-120

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Citrate cycle (TCA cycle)

Glycolysis / Gluconeogenesis

Citrate cycle (TCA cycle)

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C01575

C04351

K10775
K13064

C00188

K01450

C01586

C00512

K18860

C05620

K00487

C00423

C01772

C00811

DDC

K00270
K00817
K00830
K00850
K00852

TAK
K00817
K00830
K00850
K00852

K00270
K00817
K00830
K00850
K00852

K00270
K00817
K00830
K00850
K00852

K10797

C01145

C00223

C00156

C05332

C00166

MIF

C12620

C05629

C11457

C01198

MAOA

K03782
K02337
K03711

K12732

HPD

K18606

C05607

C02763

K05708

C12622

C11588

C00323

K03782
K02337
K03711

C00601

K00955

C05607

C02763

K05712

C12622

C11588

K05712

C00323

ALDH3

K00146

C05853

C05852

Styrene degradation

K10437

C12623

C04044

C00406

C02585
C05142
C00642

C07086

K10437

C05852

Styrene degradation

K10437

C12623

C04044

K05713

K05713

C00406

C05593

K02614

C06207

C06207

Benzoate degradation

C00582

C18361

C15233

C02137

C18355

C00542

K155
GLYAT

C05593

C04143

K02602

C02062

C05369

K02603

C09945

K02603

C00596

C00755

C05593

C04143

K02602

C02062

C05369

K02603

C09945

K02603

C00596

C00755

C00091

C02230

C00074

K01692

C00024

Citrate cycle (TCA cycle)

K04073

C00024

C03589

K01666

C00022

C16666

C18202

C00122

K02554

C00596

C00755

C00630

C00083

C00042

Citrate cycle (TCA cycle)

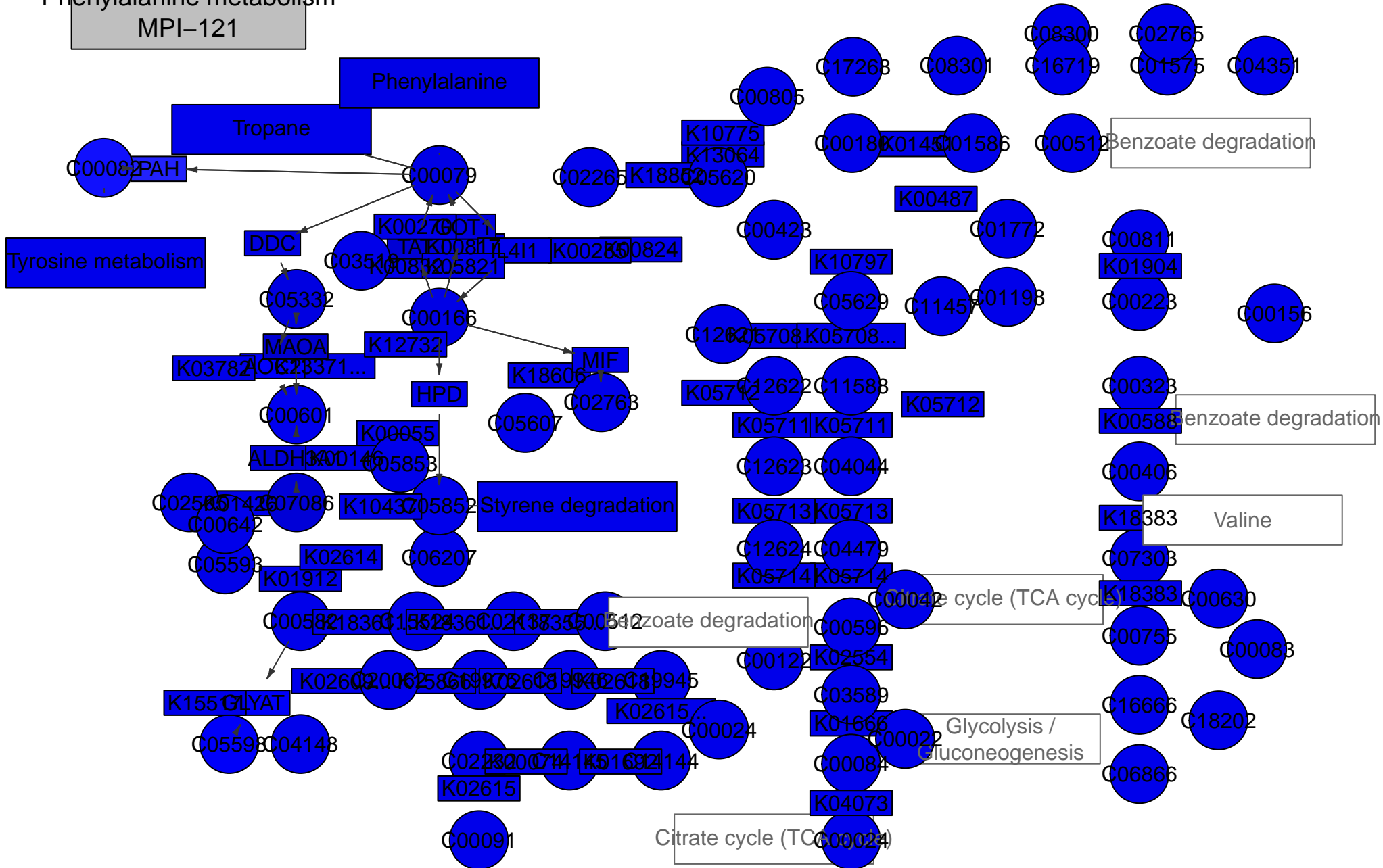
K18383

C07303

C00630

Phenylalanine metabolism

MPI-121



Phenylalanine metabolism
MPI-124

Phenylalanine

Tropane

PAH

Tyrosine metabolism

DDC

GOT1

TAK

MAOA

K12732

MIF

HPD

K18606

C00601

K00955

ALDH3

K00146

Styrene degradation

C02585

C05142

C07086

C05852

C00642

C05593

C02614

C06207

K01912

C00582

C18361

C15283

C02137

C03735

C00542

K155 GLYAT

C02602

C00625

C03669

C02603

C03995

C05598

C04148

K02615

C00091

C02280

C00074

K01692

C00144

C00024

K02615

C00024

Citrate cycle (TC

C00805

C17268

C08301

C16719

C08300

C02765

C01575

C04351

K10775

K13064

C02265

K18862

C05620

C00188

K01450

C001586

C00512

Benzoate degradation

K00487

C00423

C01772

C00811

K01904

C05332

C03519

C00830

C05821

C05629

C11457

C01198

C00223

C00156

C12620

C05708

K05708

C00323

K00588

Benzoate degradation

C05712

C12622

C011588

K05712

C00406

K00588

Benzoate degradation

C12623

C04044

C00406

K05713

K05713

C07303

K18383

Valine

C12624

C04479

K05714

K05714

C07303

K18383

C00630

Citrate cycle (TCA cycle)

C00596

C00755

C00083

C00122

K02554

C03589

K01666

C00022

Glycolysis / Gluconeogenesis

C16666

C18202

C00084

C06866

K04073

C00024

C00024

Citrate cycle (TC

Phenylalanine metabolism
MPI-131

Phenylalanine

Tropane

PAH

C00079

C02265

C00805

C17268

C08301

C08300

C16719

C02765

C01575

C04351

Benzoate degradation

K10775
K13064

C00188

K01450

C01586

C00512

C00423

K18860

C00423

K00487

C01772

C00811

Tyrosine metabolism

DDC

C03519

K00270

K00817

K00817

K00280

C00423

K10797

C01198

K01904

C00156

C05332

C00166

MIF

C12620

C05629

C11457

C00223

MAOA

C00601

K12732

K03782

K02337

K02337

C12620

C11588

K05712

C00323

K00588

Benzoate degradation

K03782

C00601

K00955

K00955

K18606

C05607

K05712

K05711

K05711

C00406

ALDH3

C00146

K00146

K00146

C05853

C12623

C04044

C00406

C02585

C05142

C07086

C00642

C05593

C06207

K05713

K05713

K18383

Valine

C05593

K02614

K02614

C06207

K01912

C06207

C12624

C04479

K05714

K05714

C07303

K18383

C00630

C00582

C18360

C15283

C02137

C01835

C00596

C00042

Cycle (TCA cycle)

C00596

C00755

C00083

K155

C05593

C04143

K02602

C00062

C00062

C00122

K02554

C03589

C16666

C18202

C05593

C04143

C02230

C00074

K02615

C00024

K01666

C00022

C00084

C06866

C05593

C04143

C02230

C00074

K02615

C00024

K01692

C00024

K04073

C06866

C00091

Citrate cycle (TCA cycle)

C00024

Glycolysis / Gluconeogenesis

Phenylalanine metabolism
MPI-169

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300
C16719

C02765
C01575

C04351

K10775
K13064

C00188

K01450

C01586

C00512

K18860

C05620

K00487

C00423

C01772

C00811

DDC

C03519

K00270
K00817
K00830
K00824

K00817
K00830
K00824

K10797

K01904

C05332

C00166

C05629

C11457

C01198

C00223

C00156

MAOA

K03782
K023371...

K12732

C00601

HPD

MIF

C12620

C05708

K05708...

C00323

K03782
K023371...

K00955

C05607

C02763

K18606

C05607

K05712

C12622

C11588

C00323

K03782
K023371...

C00601

K00955

C05607

C02763

K18606

K05712

C12622

C11588

K00588

ALDH3

K00146

C05853

C00406

C00406

C00406

C12623

C04044

C00406

C02585
C05142
C00642

C07086

K10437

C05852

Styrene degradation

C06207

K05713

K05713

K18383

C02585
C05142
C00642

C07086

K10437

C05852

Styrene degradation

C06207

K05713

K05713

K18383

C02585
C05142
C00642

C07086

K10437

C05852

Styrene degradation

C06207

K05713

K05713

K18383

C02585
C05142
C00642

C07086

K10437

C05852

Styrene degradation

C06207

K05713

K05713

K18383

C02585
C05142
C00642

C07086

K10437

C05852

Styrene degradation

C06207

K05713

K05713

K18383

C02585
C05142
C00642

C07086

K10437

C05852

Styrene degradation

C06207

K05713

K05713

K18383

C02585
C05142
C00642

C07086

K10437

C05852

Styrene degradation

C06207

K05713

K05713

K18383

C02585
C05142
C00642

C07086

K10437

C05852

Styrene degradation

C06207

K05713

K05713

K18383

C02585
C05142
C00642

C07086

K10437

C05852

Styrene degradation

C06207

K05713

K05713

K18383

C02585
C05142
C00642

C07086

K10437

C05852

Styrene degradation

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K18383

C02585
C05142
C00642

C07086

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C05852

Styrene degradation

C06207

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C02585
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Styrene degradation

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C02585
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Styrene degradation

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Styrene degradation

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Styrene degradation

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C07086

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Styrene degradation

C06207

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Styrene degradation

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C02585
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Styrene degradation

C06207

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C02585
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Styrene degradation

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C02585
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C07086

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C05852

Styrene degradation

C06207

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C02585
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C00642

C07086

K10437

C05852

Styrene degradation

C06207

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K05713

K18383

C02585
C05142
C00642

C07086

K10437

C05852

Styrene degradation

C06207

K05713

K05713

K18383

C02585
C05142
C00642

C07086

K10437

C05852

Styrene degradation

C06207

K05713

K05713

K18383

C02585
C05142
C00642

C07086

K10437

C05852

Styrene degradation

C06207

K05713

K05713

K18383

Phenylalanine metabolism
MPI-193

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

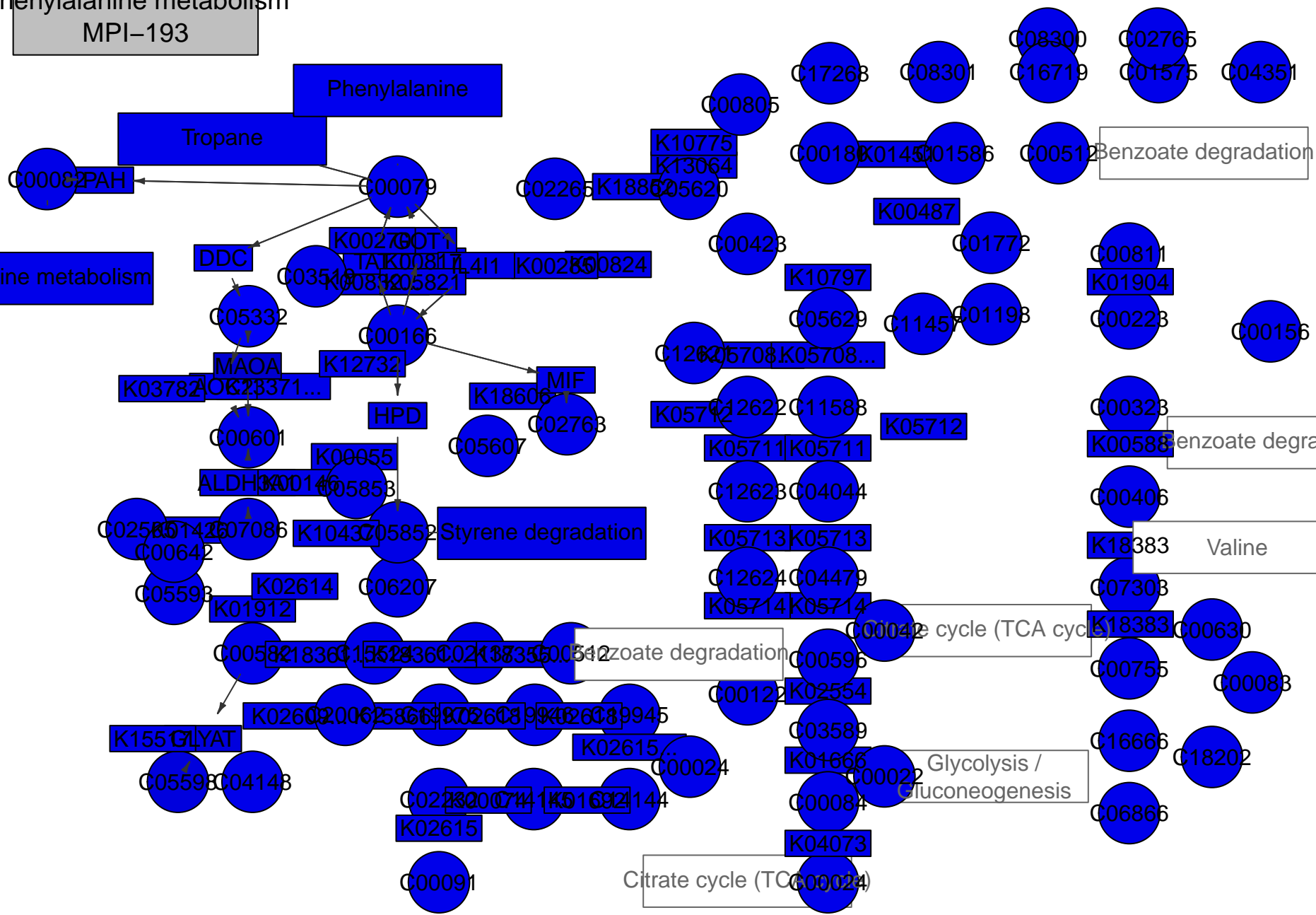
Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC



Phenylalanine metabolism
MPI-216

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C04351

C16719

C01575

K10775
K13064

C00188

K01450

C01586

C00512

K18860

C05620

K00487

C00423

C01772

C00811

DDC

K00270

GOT1

K00817

L411

K00280

C00824

C03519

TAK

K00830

C05821

K10797

C01145

C00223

C00156

C05332

C00166

MIF

C12620

C05629

C11457

C01198

MAOA

C00601

K12732

HPD

K18606

C02763

C12621

C01158

K05712

C00323

K03782

K02337

K00955

C05607

C02763

K05712

K05711

K05711

K05712

K00588

ALDH3

C00146

C05853

C05607

C02763

C12623

C04044

C00406

C02585

C05142

C07086

K10437

C05852

Styrene degradation

K05713

K05713

K18383

Valine

C05593

K02614

C06207

C06207

C06207

C06207

C12624

C04479

K05714

K05714

C07303

C00582

C18361

C15283

C02137

C01835

C00542

Benzoate degradation

C00042

cycle (TCA cycle)

K18383

C00630

K155

GLYAT

C05598

C04143

C02062

C00625

C03669

C02608

C03995

C02608

C00596

C00755

C00083

C05598

C04143

C02062

C00625

C03669

C02608

C03995

C02608

C00024

C03589

C16666

C18202

C02280

C00074

K01692

C00024

C00084

C00022

Glycolysis /
Gluconeogenesis

C06866

K02615

C02280

C00074

K01692

C00024

K04073

C00091

Citrate cycle (TC

C00024

Phenylalanine metabolism
MPI-242

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

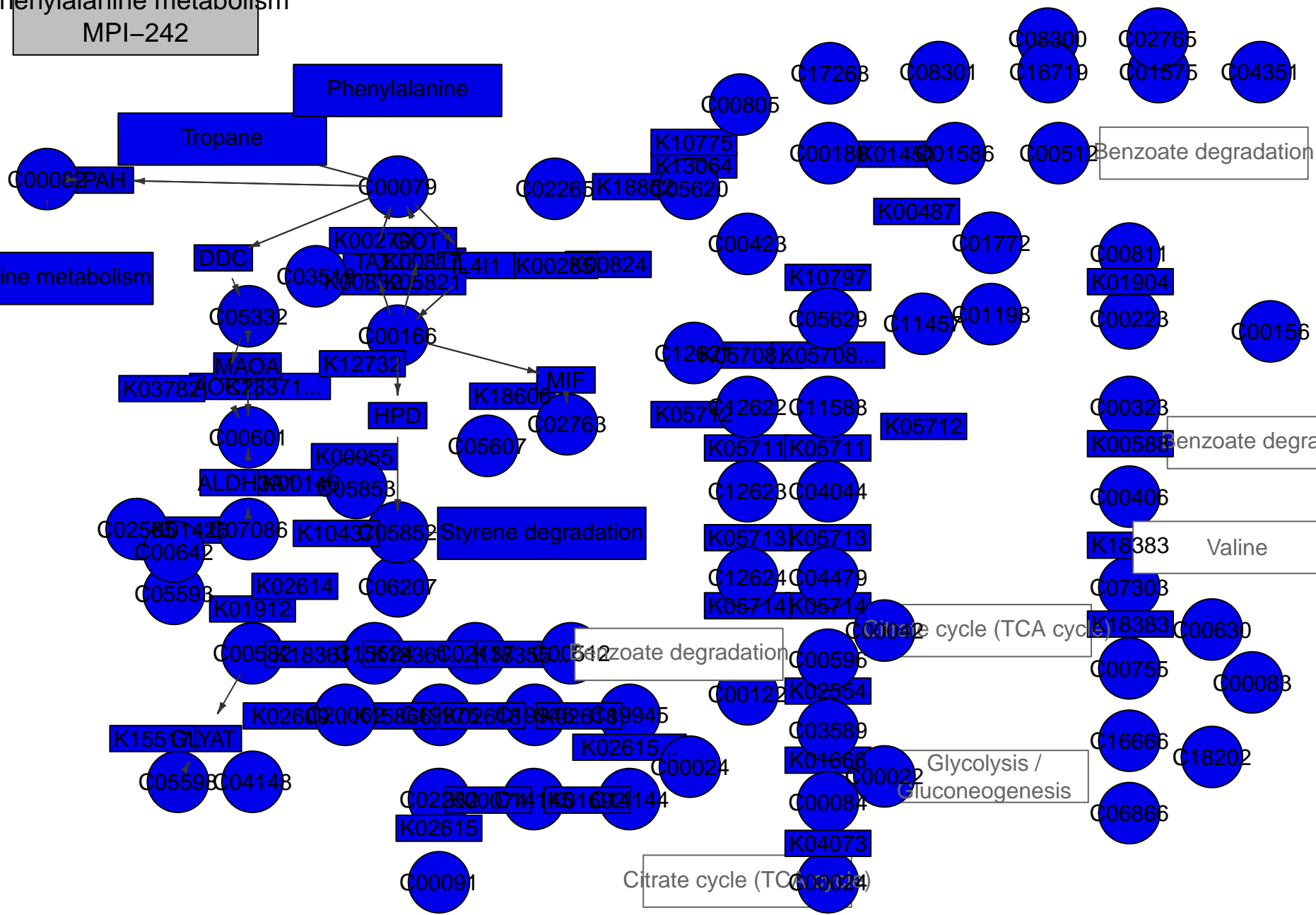
Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC



Phenylalanine metabolism
MPI-245

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

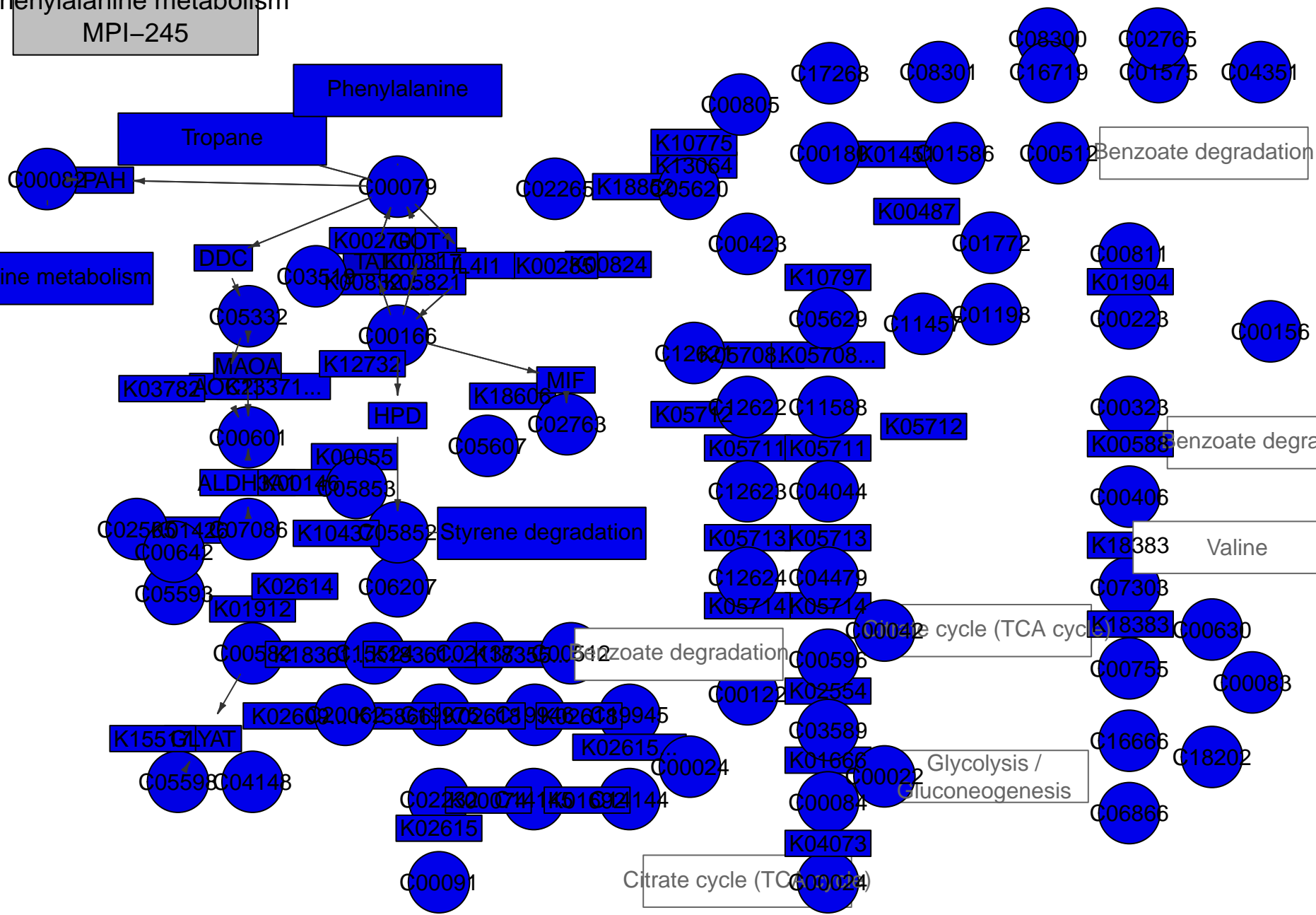
Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC



Phenylalanine metabolism
MPI-248

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

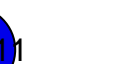
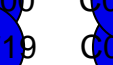
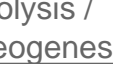
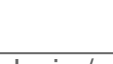
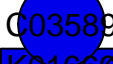
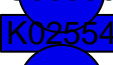
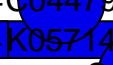
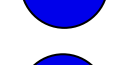
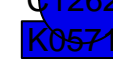
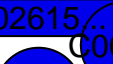
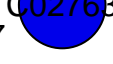
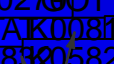
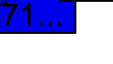
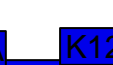
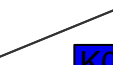
Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC



Phenylalanine metabolism
MPI-249

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

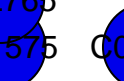
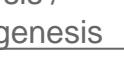
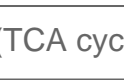
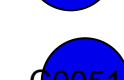
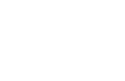
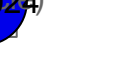
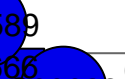
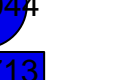
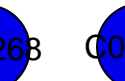
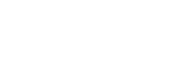
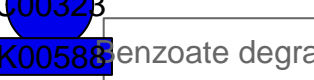
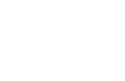
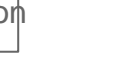
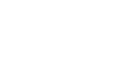
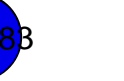
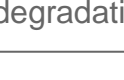
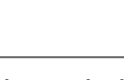
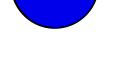
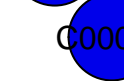
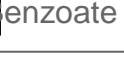
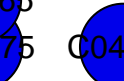
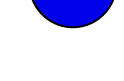
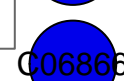
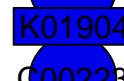
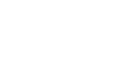
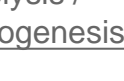
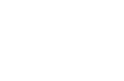
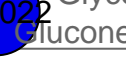
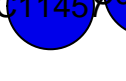
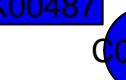
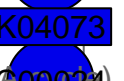
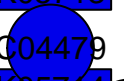
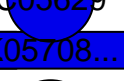
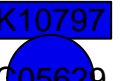
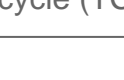
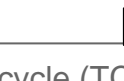
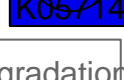
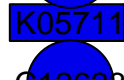
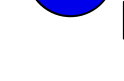
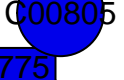
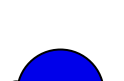
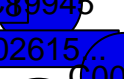
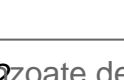
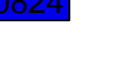
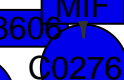
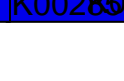
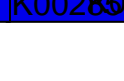
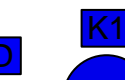
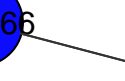
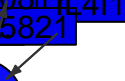
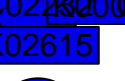
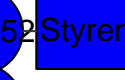
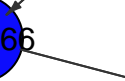
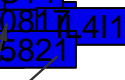
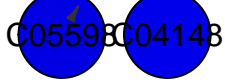
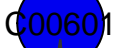
Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC



Phenylalanine metabolism
MPI-008

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300
C16719

C02765
C01575

C04351

K10775
K13064

C00188

K01450
C01586

C00512

K00487

C00423

C01772

C00811
K01904

DDC

C03519

K00270
GOT1
K00817
L411
K00280
K00824

K10797

C05332

C00166

C05629

C11457
C01198

C00223

C00156

MAOA
K03782
K023371...

C00601

K12732
HPD

C05607

MIF
K18606
C02763

C12620
C05708
K05708...

C12622
C011588

K05712
K05711
K05711

C00323
K00588

ALDH3
K00146
C05853

C00146

C05852

Styrene degradation

C06207

K05712
K05711
K05711

C12623
C04044

K05713
K05713

C00406

C02585
C05142
C00642

C07086

K10437
C05852

C06207

Styrene degradation

C06207

C12624
C04479

K05714
K05714

C07303

C05593
K01912

C00582

C18361

C15283
C06207

C02137
C0542

Benzoate degradation

C00596

C00042
C0042 cycle (TCA cycle)

C00596

K18383

C00630

C00755

C00083

K155
GLYAT

C05593
C04143

K02602
C00162
C05369

C02603
C02603

C02603
C02603

C02603
C02603

C00024

C03589
K01666

C00022
Glycolysis /
Gluconeogenesis

C00084

C16666

C18202

C05593
C04143

C02602
C00162
C05369

C02603
C02603

C02603
C02603

C02603
C02603

C00024

C03589
K01666

C00022
Glycolysis /
Gluconeogenesis

C00084

C16666

C18202

K02615

C02602
C00162
C05369

C02603
C02603

C02603
C02603

C00024

K04073

C00024
Citrate cycle (TC

C06866

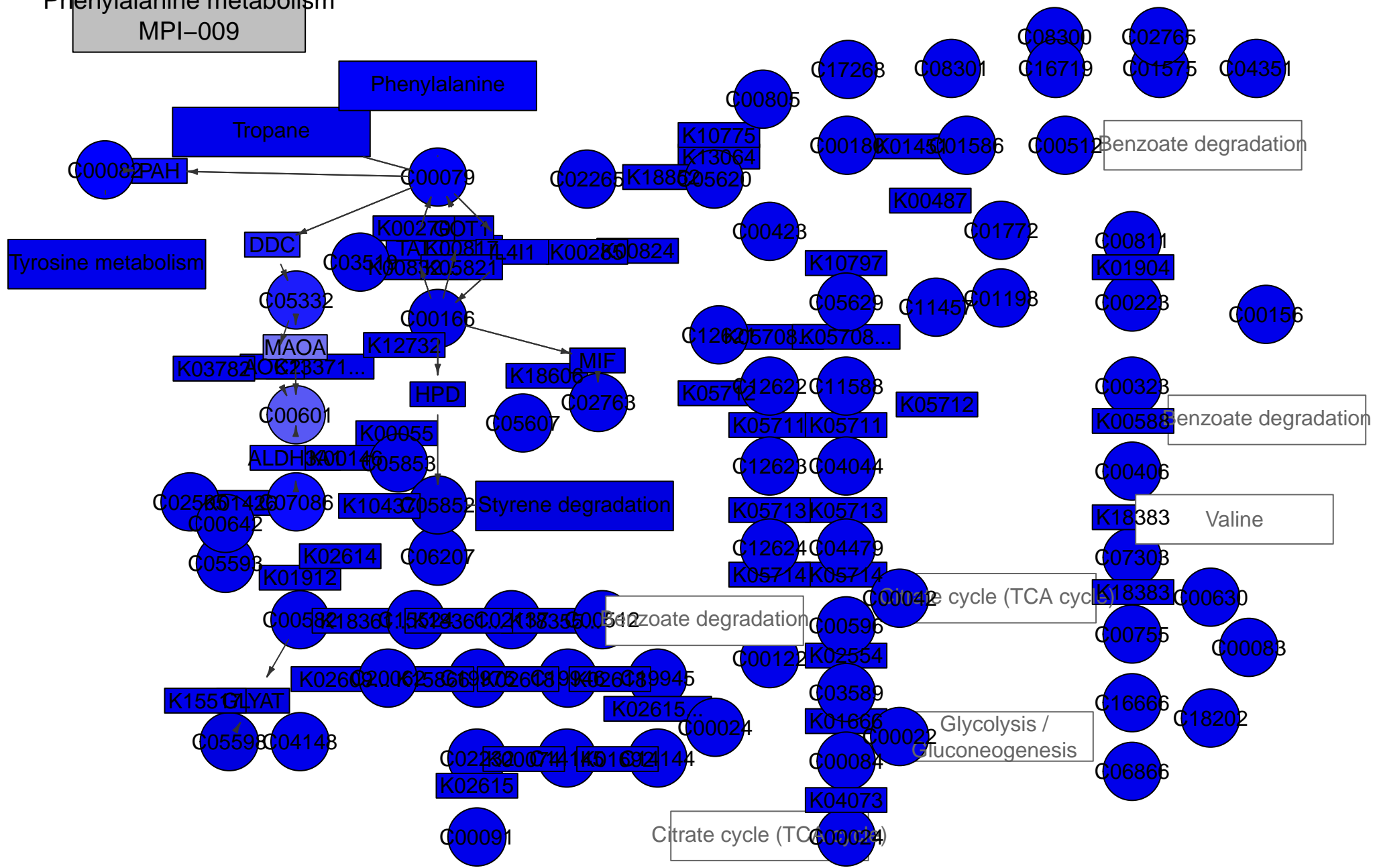
C00091

Citrate cycle (TC

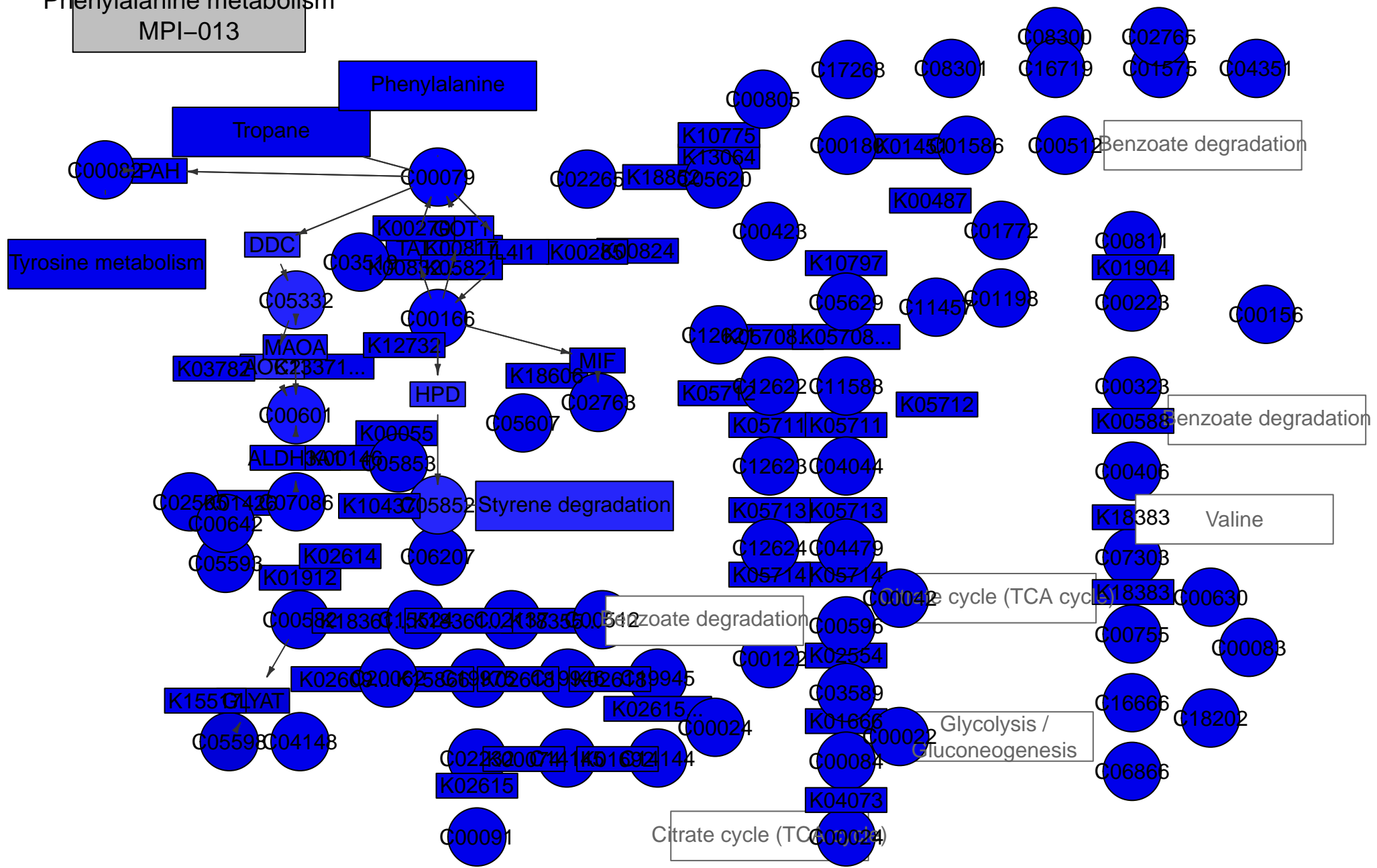
C00024

C06866

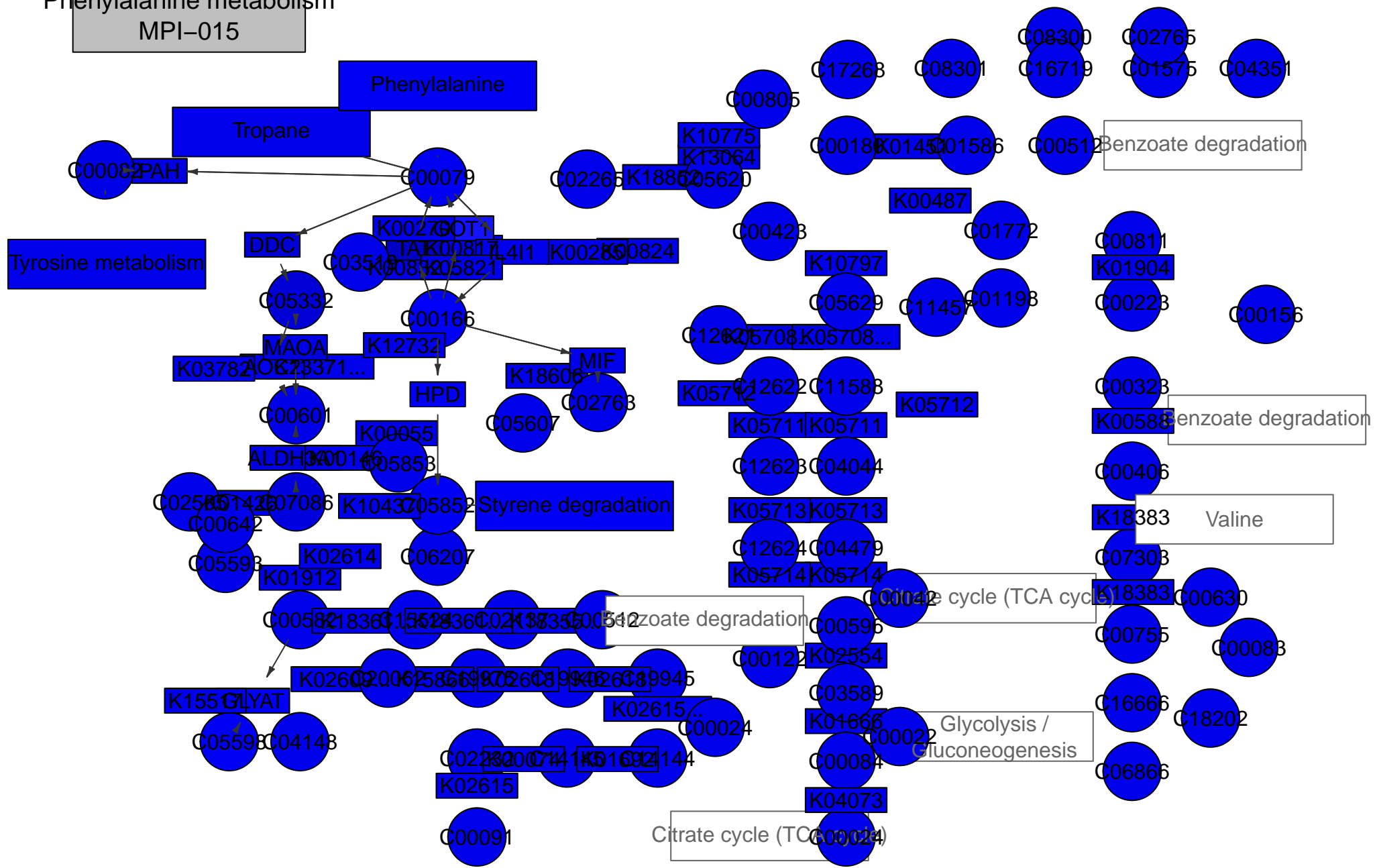
Phenylalanine metabolism
MPI-009



Phenylalanine metabolism
MPI-013



Phenylalanine metabolism
MPI-015



Phenylalanine metabolism
MPI-021

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300
C16719

C02765
C01575

C04351

K10775
K13064

C00188

K01450

C01586

C00512

K00487

DDC

K00270

GOT1

K00817

L411

C00423

C01772

C00811

K01904

C05332

C03519

K00850

C05821

K10797

C01198

C00223

C00156

MAOA

K12732

C00166

MIF

C12620

C05629

C11457

C01198

K03782

K02337

C00601

HPD

K18606

C05607

C02763

K05712

C12622

C11588

C00323

K00588

ALDH3

K00955

C00146

C05853

K05712

K05711

K05711

K05712

C00406

C02585

C05142

C07086

K10437

C05852

Styrene degradation

C12623

C04044

C00406

C00642

C05593

K02614

C06207

C02614

C12624

C04479

K05713

K05713

K18383

Valine

C05593

K01912

C00582

C18361

C15283

C02137

C03735

C00542

Benzoate degradation

C00042

cycle (TCA cycle)

K18383

C00630

K155

GLYAT

C02602

C20062

C05369

K02603

C03995

C00596

C00122

K02554

C00755

C00083

C05593

C04143

C02602

C05369

K02603

C03995

C00024

K01666

C00022

C16666

C18202

C02280

C00074

K01692

C00144

C00084

K04073

C00024

C06866

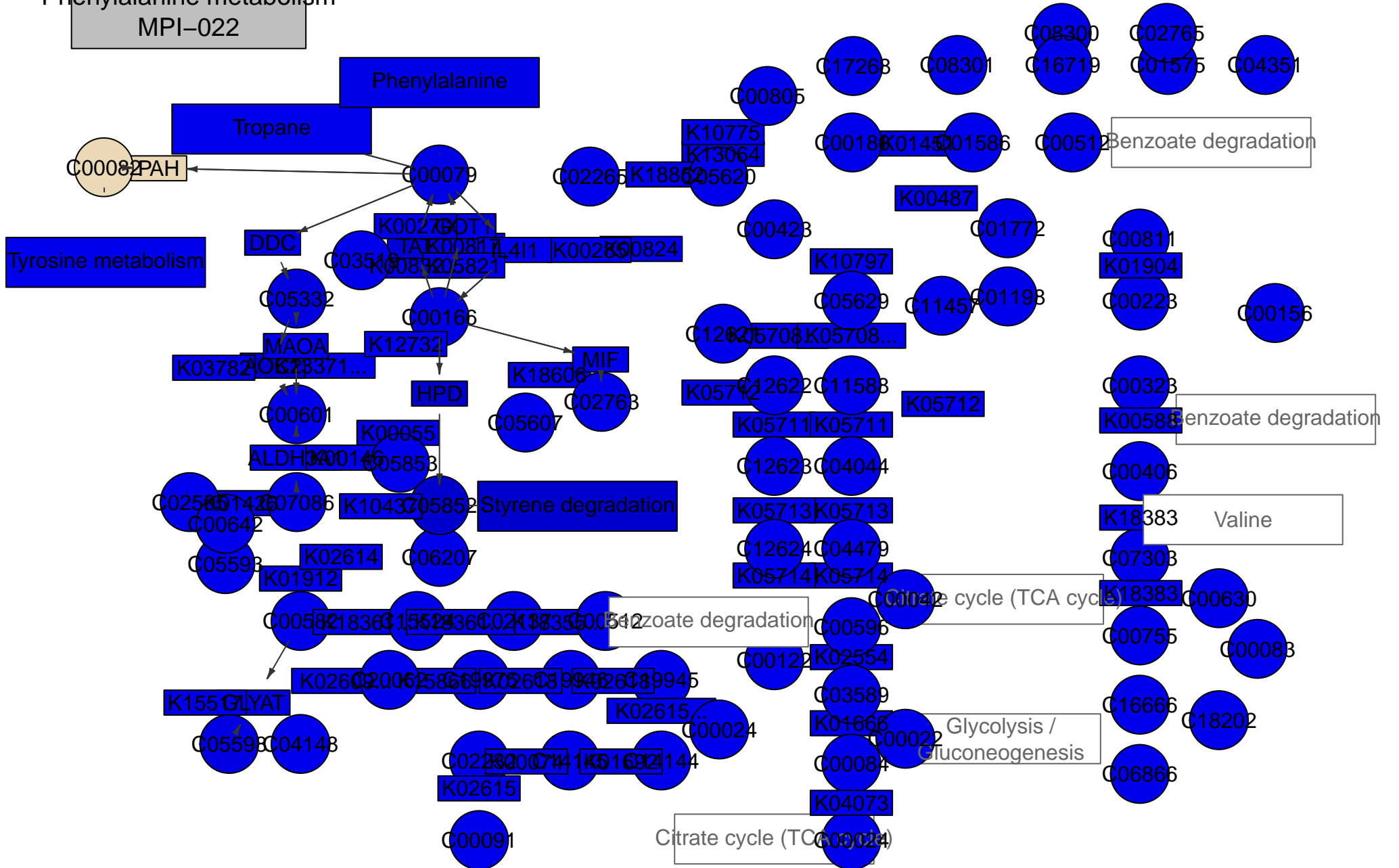
C00091

Citrate cycle (TC

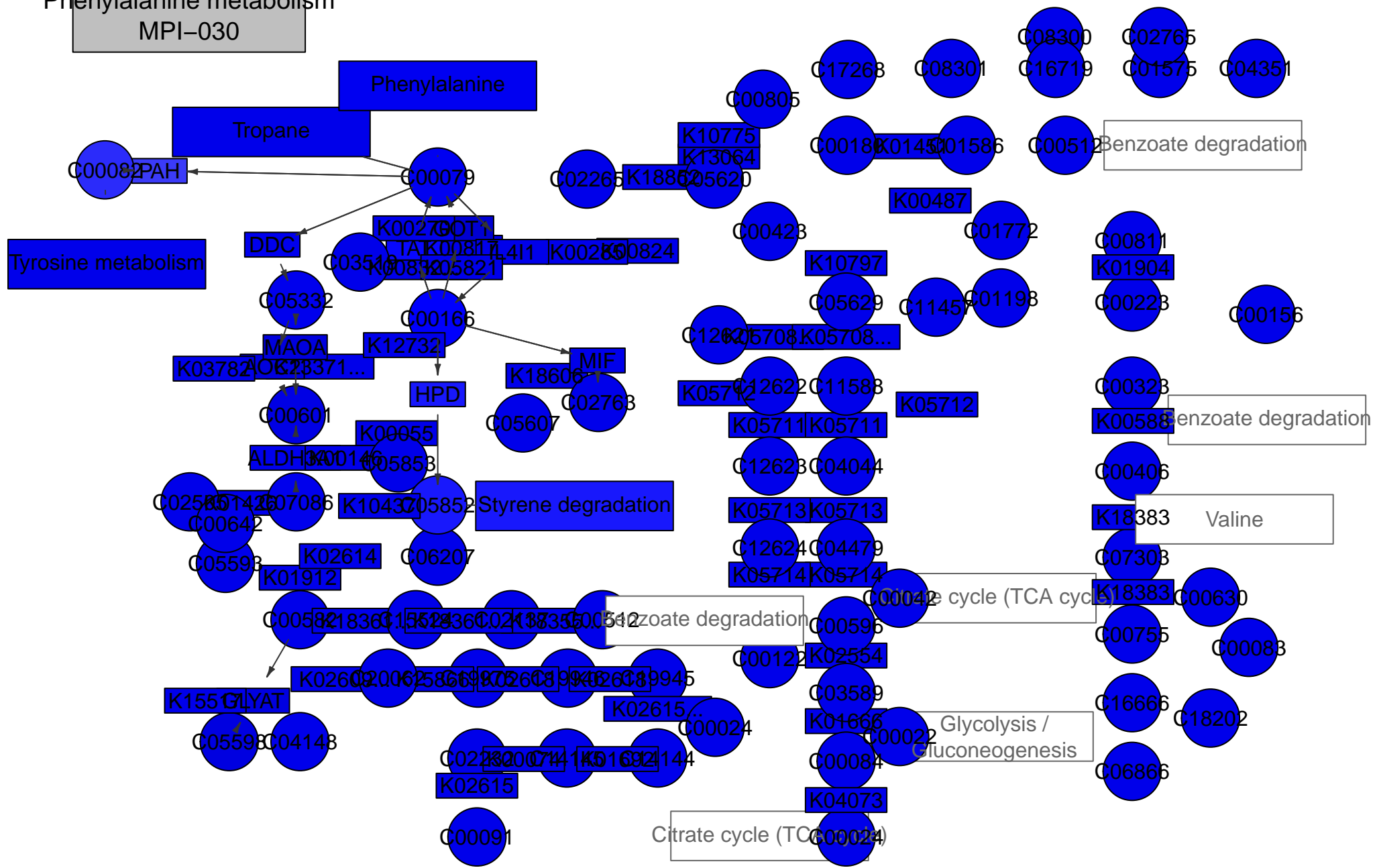
C00024

Phenylalanine metabolism

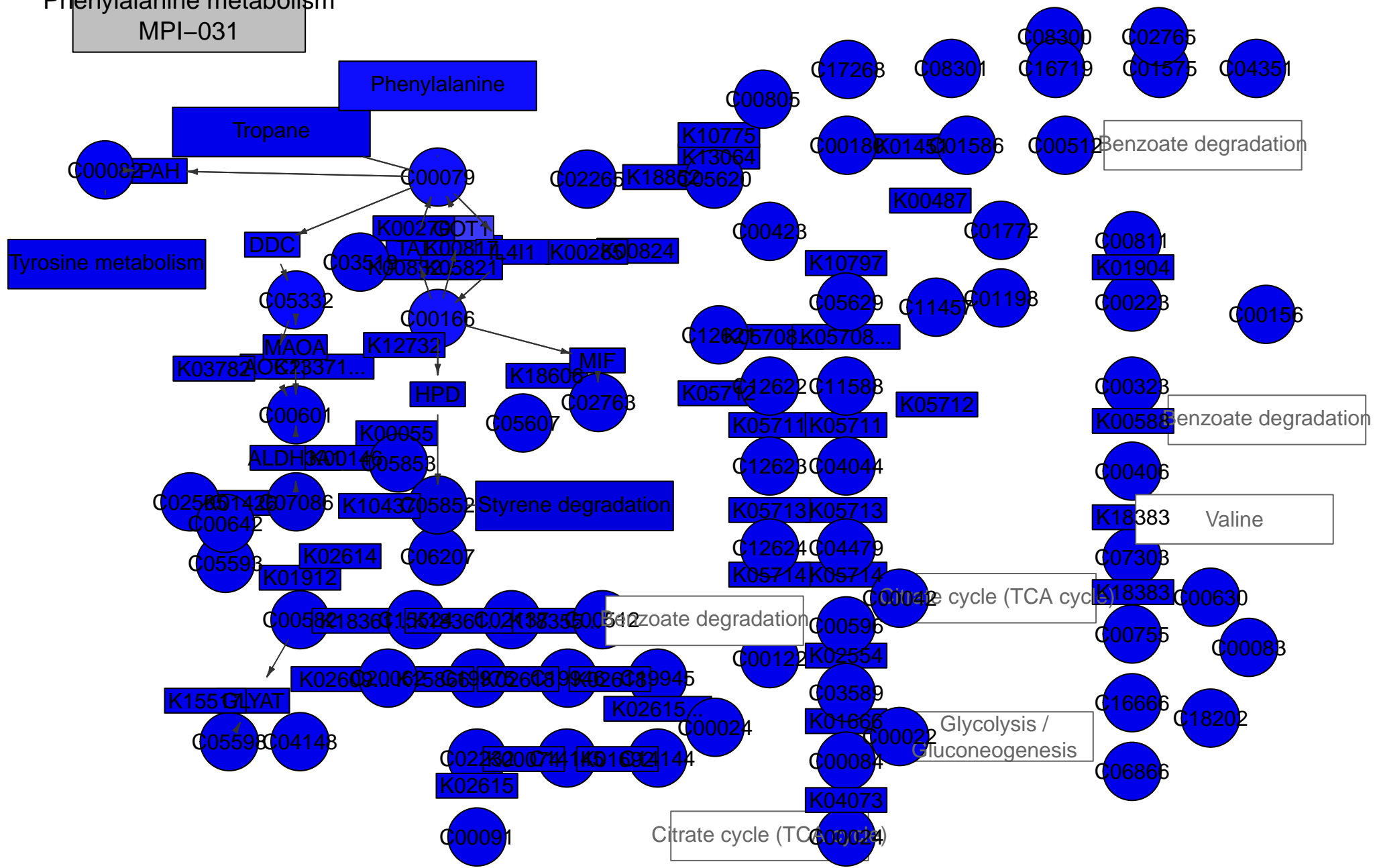
MPI-022



Phenylalanine metabolism
MPI-030



Phenylalanine metabolism
MPI-031



Phenylalanine metabolism
MPI-039

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

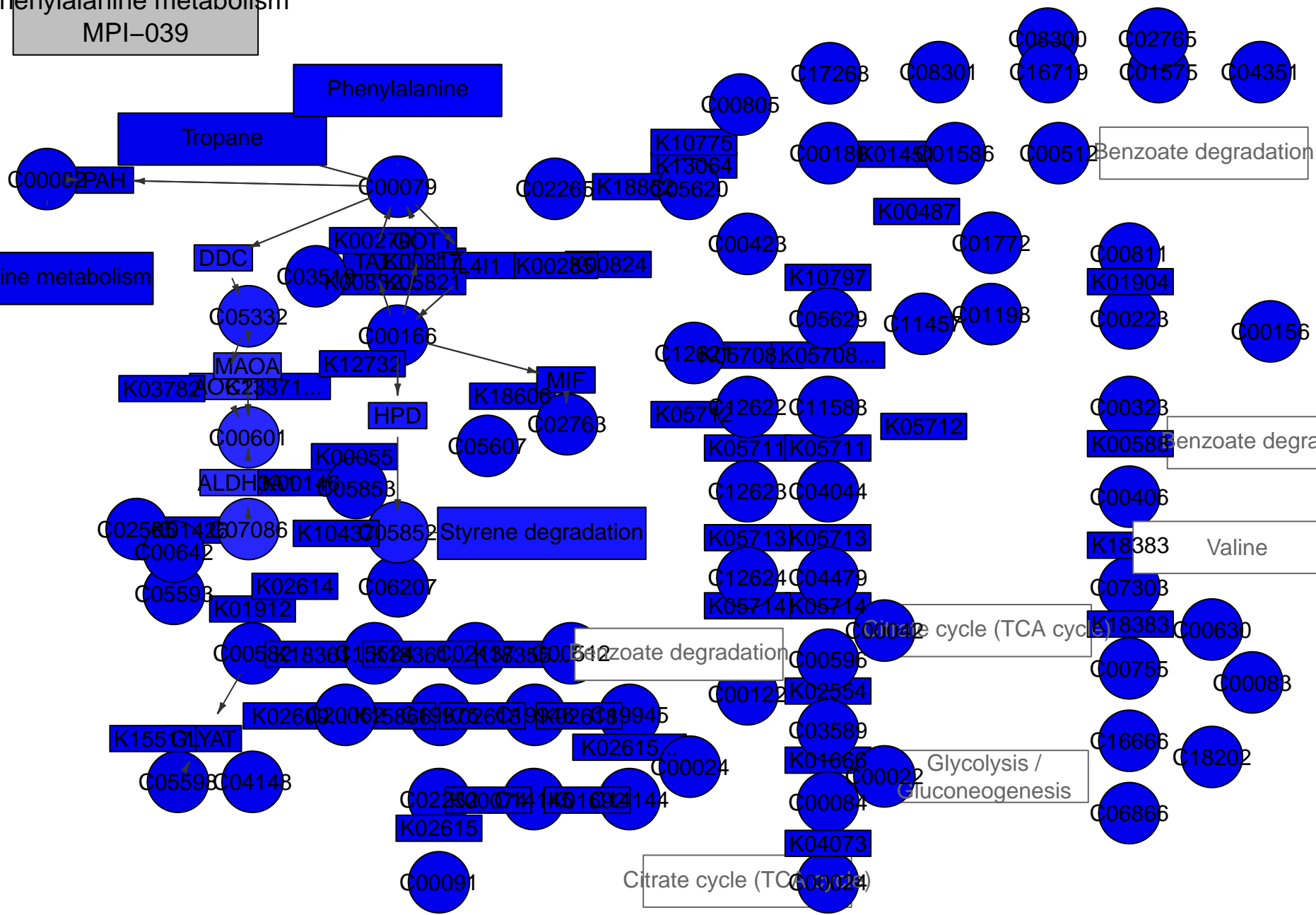
Benzoate degradation

Valine

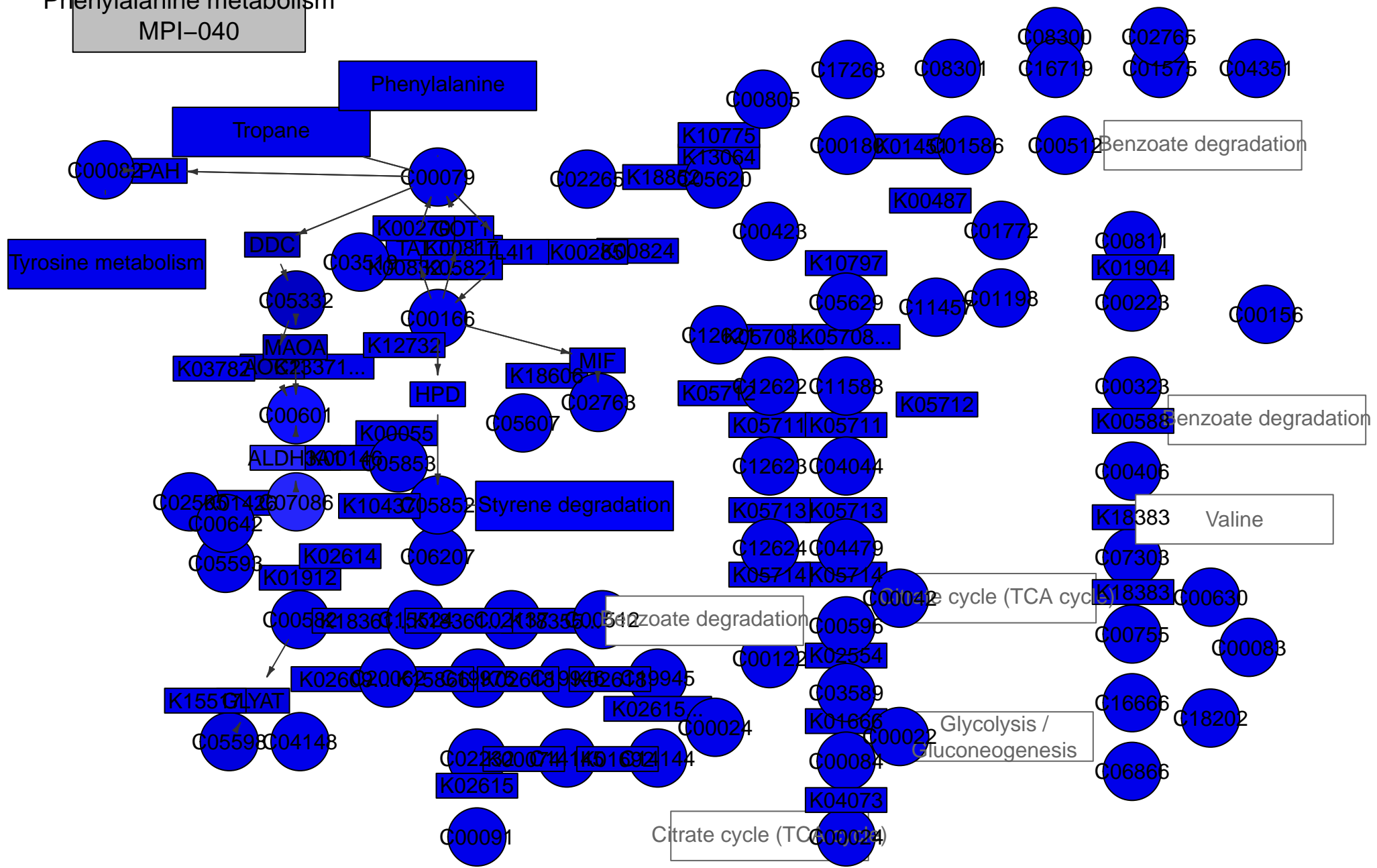
Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

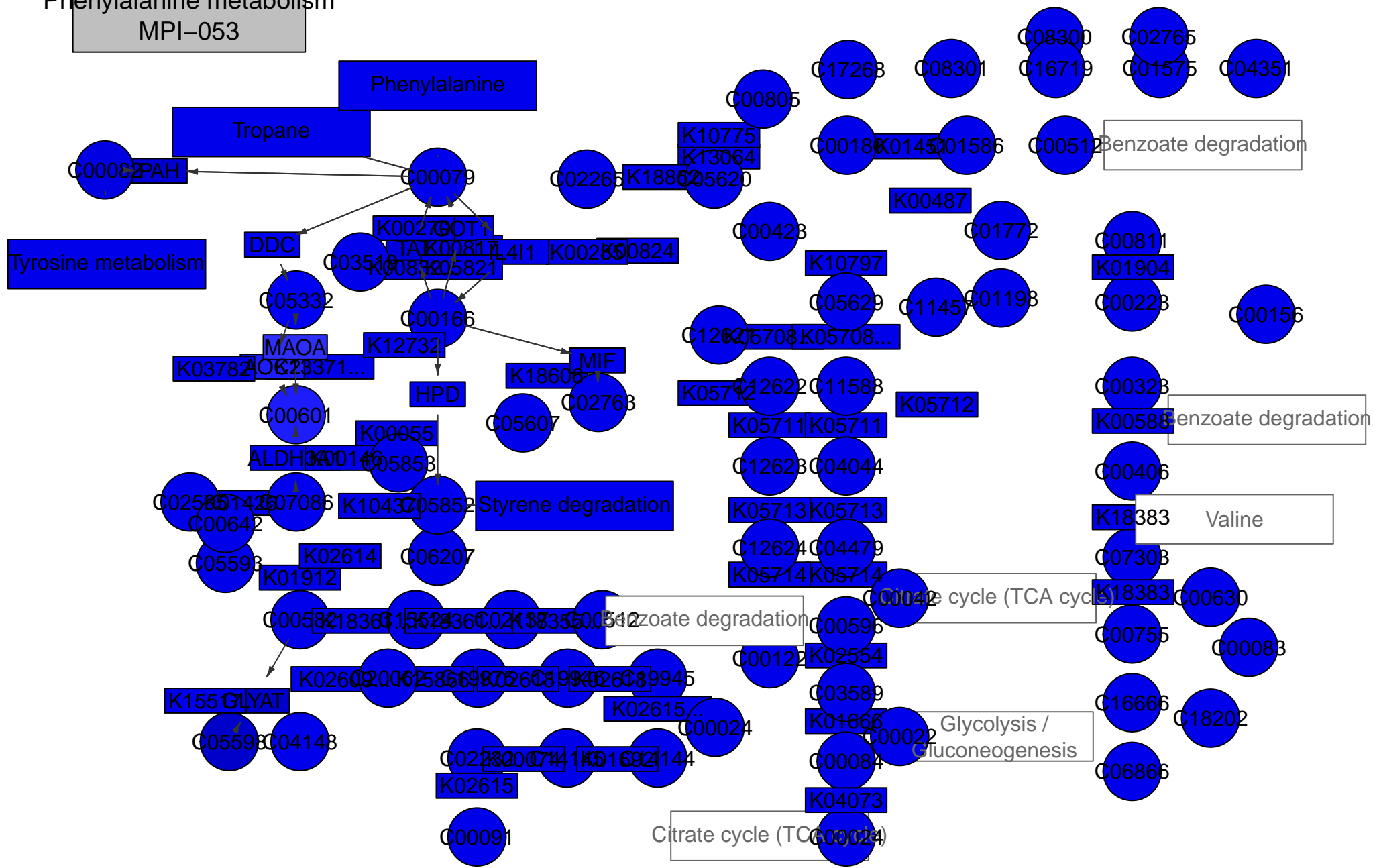


Phenylalanine metabolism
MPI-040



Phenylalanine metabolism

MPI-053



Phenylalanine metabolism
MPI-062

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C01575

C04351

K10775
K13064

C00188

K01450

C01586

C00512

K18860

C05620

K00487

C00423

C01772

C00811

DDC

C03519

K00270
K00817
K00830
K00824

C00817
K00280
K00824

K10797

C01198

K01904

C05332

C00166

C05629

C11457

C00223

C00156

MAOA

C00601

K12732

K03782
K023371...

MIF

C02763

C12622

C11588

C00323

K03782
K023371...

C00601

K00955

K18606

C05607

C02763

K05712

C12622

C11588

C00323

ALDH3

C00146

K00146

C05853

K05712

K05711
K05711

C12623

K00588

C02585
C05142
C00642

C07086

K10437

C05852

C06207

Styrene degradation

C12623

C04044

C00406

C05593

K02614

C06207

K01912

C00592

C18361

C152336

C0213735

C00542

K18383

C00630

K155
GLYAT

C05593

C04143

K02602

C02062

C05369

K02603

C03589

C00024

C16666

C18202

C05593

C04143

C022300

C00074

K01692

C00024

K01666

C00022

C06866

K02615

C022300

C00074

K01692

C00024

K04073

C00091

Citrate cycle (TC

C00024

C06866

Phenylalanine metabolism
MPI-063

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300
C16719

C02765
C01575

C04351

K10775
K13064

C00180
K01450

C01586

C00512

K00487

DDC

K00270
GOT1

TAK
K00817
L411

K00280
K00824

K00830
K05821

C025620

C00423

C01772

C01772

C00811
K01904

C00223

C00156

C05332

C03519

C00166

C00166

MIF

C12620
C05629

C11457

C01198

C00022

C00022

C00022

MAOA
K03782
K023371...

C00601

K12732

HPD

K18606

C05607

C12620
C05708...

C11588

K05712

C00323

K00588

C00046

C00046

ALDH3
K00146

C00585

K00955

C05853

C05853

C05853

C12622
K05712

C11588
K05711
K05711

K05712

C00323

K00588

C00046

C00046

C02585
C05142
C00642

C07086

K10437

C05852

C05852

C05852

C12623
C04044

K05713
K05713

K05713

C00406

C00406

C00406

C00406

C05593

K02614

C06207

C06207

C06207

C06207

C12624
C04479

K05714
K05714

K05714

C07303

C07303

C07303

C07303

C00582
C18361

C15283
C02137

C18361
C02137

C02137
C00542

C00542

C00596

C00596

C00042

C00042

C00042

C00042

C00042

K155
GLYAT

C05598

C02062
C00625

C00625
C03669

C03669
K02608

K02608
C03995

C00122

K02554

C00596

C00755

C00755

C00083

C00083

C05598

C04148

C02280
C00074

C00074
K01692

K01692
C02144

C00024

C03589

K01666

C00022

C16666

C16666

C18202

C18202

C05598

C04148

C02280
C00074

C00074
K01692

K01692
C02144

C00024

C00084

C00084

K04073

C06866

C06866

C06866

C06866

C00091

C00024

C00024

C00024

C00024

C00024

C00024

C00024

C00024

C00024

Phenylalanine metabolism
MPI-069

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

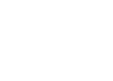
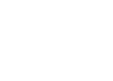
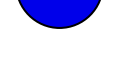
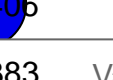
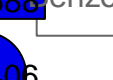
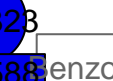
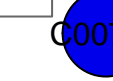
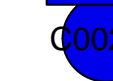
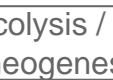
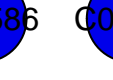
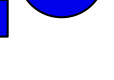
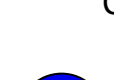
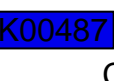
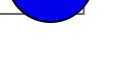
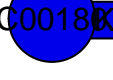
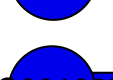
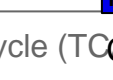
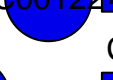
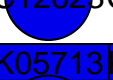
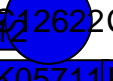
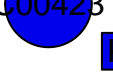
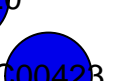
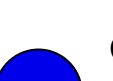
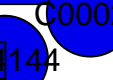
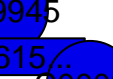
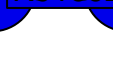
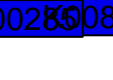
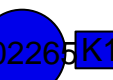
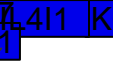
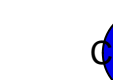
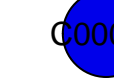
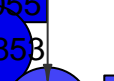
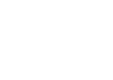
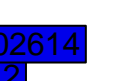
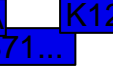
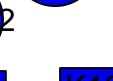
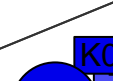
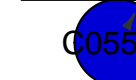
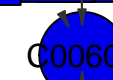
Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC



Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

Citrate cycle (TCA cycle)

Phenylalanine metabolism
MPI-083

Phenylalanine

Tropane

PAH

Tyrosine metabolism

DDC

DOT

TAK

MAOA

K12732

MIF

HPD

K18606

C00601

K00955

C05607

ALDH3

K00146

Styrene degradation

C02585

C05142

C07086

C05852

C00642

C05593

C02614

C06207

K01912

C00582

C01836

C01523

C02336

C01183

C00542

GLYAT

C02602

C00062

C02536

C02603

C02608

C02608

C02608

C02608

C02608

C05598

C04148

C02230

C00074

C05169

C02144

C00024

C01666

C00022

C00084

C06866

K02615

C02230

C00074

C05169

C02144

C00024

C01666

C06866

C00091

C00024

C00024

C00805

C17268

C08301

C16719

C08300

C02765

C01575

C04351

K10775

K13064

C00188

K01450

C001586

C00512

Benzoate degradation

C02265

K18860

C05620

K00487

C00423

C01772

C00811

K01904

K10797

C05629

C11457

C01198

C00223

C00156

C12620

C05708

K05708

C00323

K00588

Benzoate degradation

K05712

C12622

C11588

K05712

C00406

K18383

Valine

C12623

C04044

K05713

K05713

C12624

C04479

K05714

K05714

C07303

K18383

C00630

C00582

C01836

C01523

C02336

C01183

C00542

C00596

C00042

C00042

C00042

C00042

C00042

C00122

K02554

C00596

C00596

C00755

C00083

K155

C05598

C04148

C02602

C00062

C02536

C02603

C02608

C02608

C02608

C02608

C02608

C02608

C02230

C00074

C05169

C02144

C00024

C01666

C00022

C00084

C06866

K02615

C02230

C00074

C05169

C02144

C00024

C01666

C06866

C00091

C00024

C00024

Citrate cycle (TCA cycle)

C00024

C00042

Glycolysis / Gluconeogenesis

Phenylalanine metabolism
MPI-088

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C04351

C16719

C01575

K10775
K13064

C00188

K01450

C01586

C00512

K18860

C05620

K00487

C00423

C01772

C00811

DDC

K00270

GOT1

K00817

L411

K00280

K00824

C03519

TAK

K00830

C05821

K10797

C01198

K01904

C05332

C00166

MIF

C12620

C05629

C11457

C01198

C00223

C00156

MAOA

K03782

K02337

K12732

HPD

K18606

C12620

C11588

K05712

C00323

K03782

K02337

K12732

HPD

K18606

C12620

C11588

K05712

K05712

C00323

C00601

K00955

C05607

C02763

K05712

K05711

K05711

K00588

ALDH3

K00146

C05853

C06207

C12623

C04044

C00406

C02585

C05142

C07086

K10437

C05852

Styrene degradation

K05713

K05713

C00406

C00642

C05593

K02614

C06207

C12624

C04479

K05714

K05714

C07303

C05593

K01912

C00582

C18361

C15283

C02137

C18355

C00542

Benzoate degradation

C00042

Cycle (TCA cycle)

K18383

C00630

K155

GLYAT

C02602

C00062

C02536

C07261

C09945

C00122

K02554

C00596

C00755

C00083

C05593

C04143

C02602

C00062

C02536

C07261

C09945

C00122

K02554

C00596

C00755

C00083

C02280

C00074

K01692

C00024

K01666

C00022

Glycolysis /
Gluconeogenesis

C16666

C18202

K02615

C02280

C00074

K01692

C00024

K01666

C00022

C16666

C18202

C00091

Citrate cycle (TC

K04073

C00024

C06866

Phenylalanine metabolism
MPI-092

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C04351

C01575

C16719

C00512

C00181

C01450

C01586

K10775

K13064

K18860

C05620

K00487

C00423

C01772

C00811

K01904

DDC

C03519

K00270

K00817

K00817

K00280

K00824

K10797

C11457

C01198

C00223

C00156

C05332

C00166

MIF

C12620

C05629

C11457

C01198

MAOA

C00601

K12732

K03782

K02337

K02337

C12620

C011588

K05712

C00323

K00588

K18606

C05607

C02763

K05712

K05711

K05711

C00406

C02585

C05142

C07086

C00642

C05593

C06207

C12623

C04044

K05713

K05713

C00406

K18383

Valine

C05593

K02614

C06207

K01912

C00582

C18361

C15233

C02137

C03735

C00542

C07303

K18383

C00630

K155

C05593

C04143

K02602

C02062

C05369

K02603

C03268

C03945

C00596

C00755

C00083

C05593

C04143

K02602

C02062

C05369

K02603

C03268

C03945

C00024

C03589

C01666

C16666

C18202

C05593

C04143

C02230

C00074

K01692

C00144

C00024

C00084

C00022

C16666

C06866

C05593

C04143

K02615

C02230

C00074

K01692

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C05593

C04143

C00091

C00024

C00024

C00024

C00024

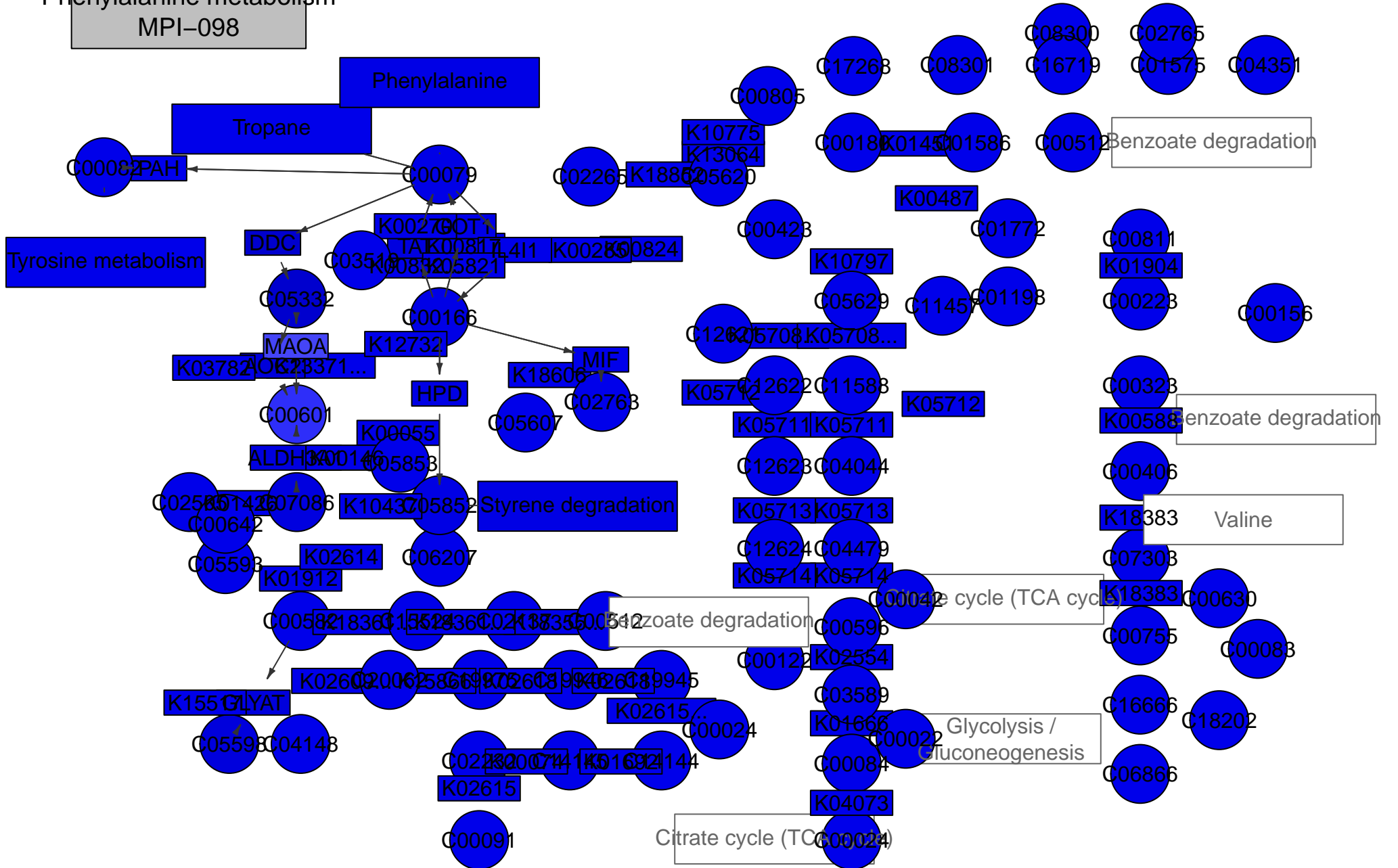
C00024

C00024

C06866

Phenylalanine metabolism

MPI-098



Phenylalanine metabolism
MPI-105

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Citrate cycle (TCA cycle)

Glycolysis / Gluconeogenesis

Citrate cycle (TCA cycle)

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C04351

C01575

C00512

C00181

C01450

C01586

K10775

K13064

K18860

C05620

K00487

C00423

C01772

C00811

K01904

DDC

C03519

K00270

GOT1

TAK

K00817

L411

K00280

K00824

C05332

C00166

C05629

C11457

C01198

C00223

C00156

MAOA

K12732

MIF

K03782

K02337

K18606

C02763

C12620

C05708

K05708

C00323

K00588

C00601

HPD

C05607

C02763

K05712

C12622

C11588

K05712

C00323

K00588

ALDH3

K00955

C05853

C00146

C05853

C12623

C04044

C00406

C02585

C05142

C07086

K10437

C05852

Styrene degradation

K05713

K05713

C00406

K18383

Valine

C00642

C05593

K02614

C06207

C06207

C06207

C12624

C04479

K05714

K05714

C07303

C00582

C18361

C15233

C02137

C01835

C00542

Benzoate degradation

C00596

C00042

Citrate cycle (TCA cycle)

K18383

C00630

K155

GLYAT

C02602

C00062

C05369

K02603

C02603

C03995

K02603

C03995

C00596

C00083

C05593

C04143

C02230

C00074

K01692

C00024

K01666

C00022

Glycolysis / Gluconeogenesis

C16666

C18202

K02615

C02230

C00074

K01692

C00024

C00084

K04073

C06866

C00091

Citrate cycle (TCA cycle)

C00024

Phenylalanine metabolism
MPI-106

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C01575

C04351

K10775

C00188

K01450

C001586

C00512

K18860

C05620

K00487

C00423

C01772

C00811

DDC

C03519

K00270

K00817

K00280

C00423

K10797

C01772

K01904

C05332

C00166

K00850

K005821

C05629

C11457

C01198

C00223

C00156

MAOA

C00601

K12732

K03782

K023371...

MIF

C12620

C05708...

C11588

C00323

K03782

K023371...

K18606

C05607

C02763

K05712

C12622

C11588

C00323

K03782

K023371...

K18606

C05607

C02763

K05711

K05711

K05712

K00588

ALDH3

C00146

K00955

C05853

C05607

C02763

K05711

K05711

C12623

C04044

C00406

C02585

C05142

C07086

K10437

C05852

Styrene degradation

K05713

K05713

C12623

C04044

C00406

C00642

C05593

K02614

C06207

C06207

C06207

C12624

C04479

K05714

K05714

C07303

C05593

K01912

K02614

C06207

C06207

C06207

C12624

C04479

K05714

K05714

C07303

C00582

C18361

C15283

C02137

C03735

C00542

C00596

C00442

C00442

C00442

C00630

K155

C05593

C04143

K02602

C00162

C05369

C00122

K02554

C00596

C00442

C00755

C00083

K155

C05593

C04143

K02602

C00162

C05369

C00122

K02554

C00596

C00442

C00755

C00083

C05593

C04143

C04143

C02280

C00074

K01692

C00024

K01666

C00022

C00084

C16666

C18202

C05593

C04143

C04143

C02280

C00074

K01692

C00024

K01666

C00022

C00084

C16666

C18202

C05593

C04143

C04143

C02280

C00074

K01692

C00024

K01666

C00022

C00084

C16666

C18202

C05593

C04143

C04143

C02280

C00074

K01692

C00024

K01666

C00022

C00084

C16666

C18202

C05593

C04143

C04143

C02280

C00074

K01692

C00024

K01666

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C04143

C04143

C02280

C00074

K01692

C00024

K01666

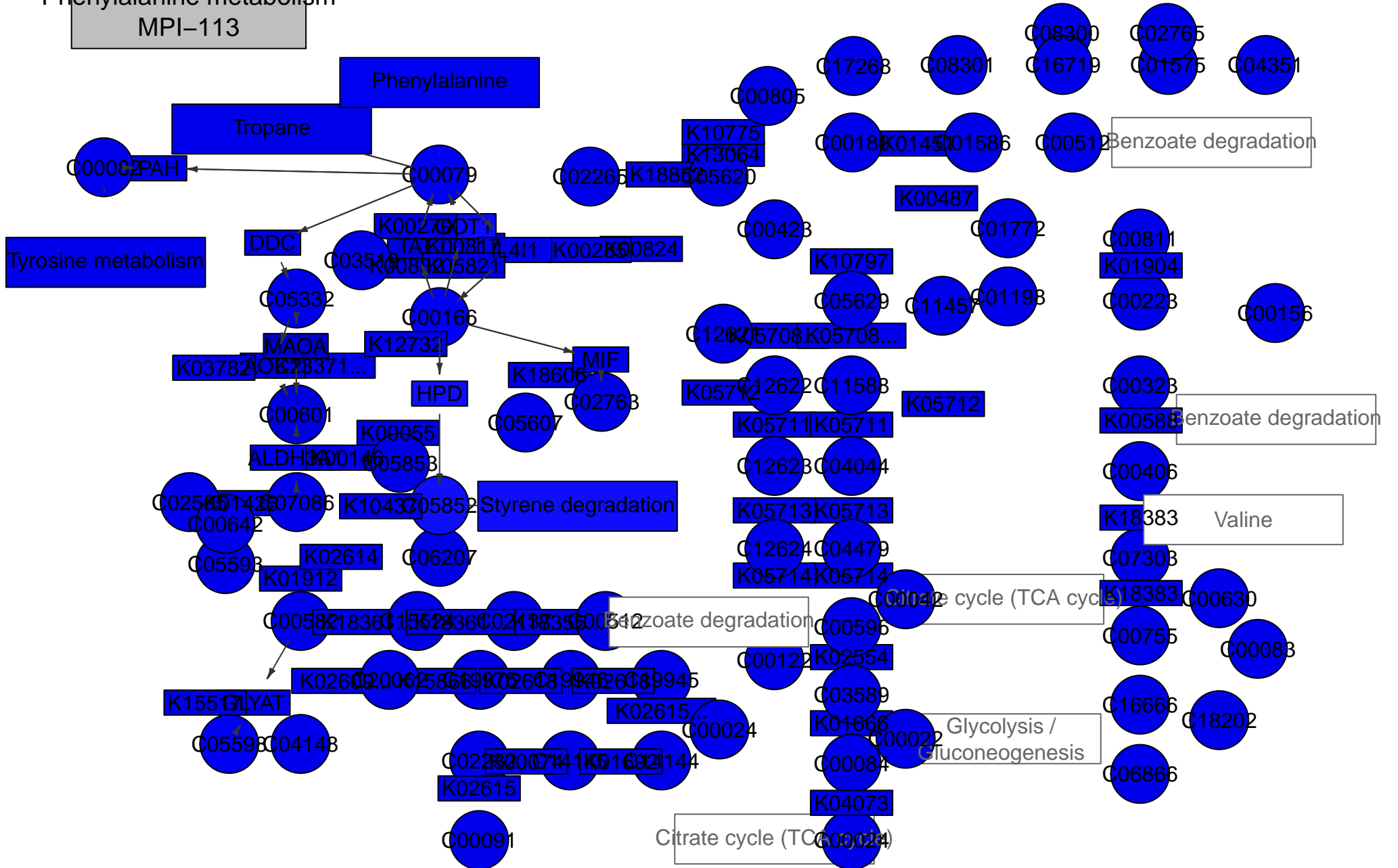
C00022

C00084

C16666

C18202

Phenylalanine metabolism
MPI-113



Phenylalanine metabolism
MPI-118

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C04351

C16719

C01575

K10775
K13064

C00188

K01450

C01586

C00512

K18860

C05620

K00487

C00423

C01772

C00811

DDC

K00270
GOT1

K00817
L411

K00280
K00824

C03519

K00830
K05821

K10797

K01904

C05332

C00166

C05629

C11457

C00223

C00156

MAOA

C00601

K12732

MIF

C12620

C05708

K05708...

K03782

K02337

K18606

C02763

C05607

K05712

C12622

C11588

C00323

HPD

C05607

C02763

K05712

C12622

C11588

K00588

ALDH3

C00146

K00955

K05711

K05711

K00588

C02585

C05142

C07086

K10437

C05852

Styrene degradation

C12623

C04044

C00406

C00642

C05593

K02614

C06207

C05852

K10437

K05713

K05713

K18383

Valine

C05593

K01912

C06207

C05852

K10437

K05713

K05713

C07303

C00582

C18361

C15283

C02137

C03735

C00542

Benzoate degradation

C00596

C00630

C00083

K155
GLYAT

C05593

C04143

K02602

C02062

C05369

K02603

C00024

C03589

C16666

C18202

C00582

C18361

C15283

C02137

C03735

C00542

C00596

C00042

cycle (TCA cycle)

K18383

C00630

C05593

C04143

K02602

C02062

C05369

K02603

C00024

C03589

Glycolysis /
Gluconeogenesis

C16666

C18202

C05593

C04143

K02602

C02062

C05369

K02603

C00024

C03589

Glycolysis /
Gluconeogenesis

C16666

C18202

K02615

C02280

C00074

K01692

C00144

C00084

C06866

C00091

K02615

C02280

C00074

K01692

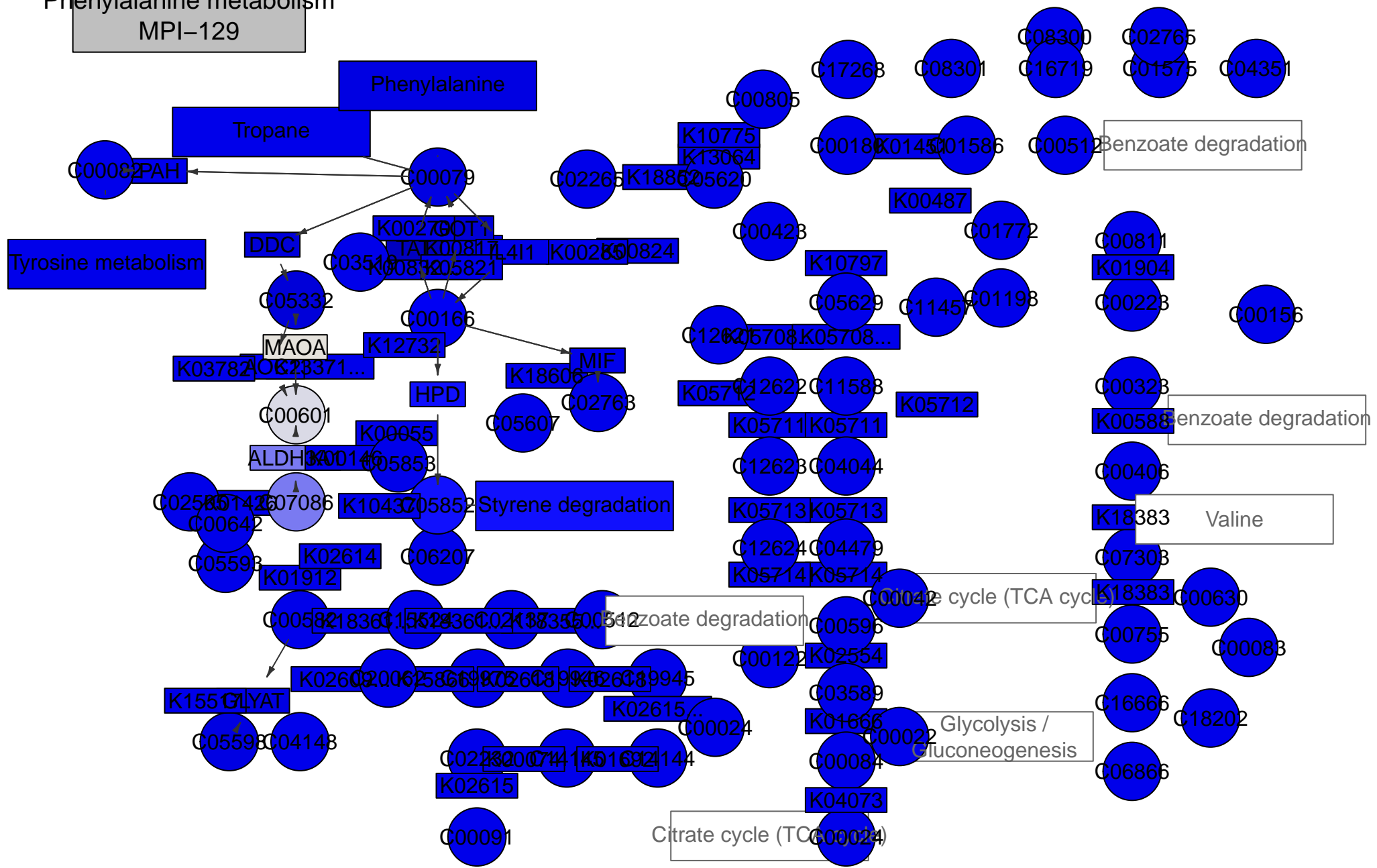
C00144

C00024

Citrate cycle (TC

C00024

Phenylalanine metabolism
MPI-129



Phenylalanine metabolism
MPI-130

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300
C16719

C02765
C01575

C04351

K10775
K13064

C00188

K01450
C01586

C00512

K00487

C00423

C01772

C00811
K01904

DDC

C03519

K00270
K00817
K00830
K05821

K00817
K00830
K05821

K00270
K00817
K00830
K05821

K10797

C05332

C00166

C05629

C11457

C01198

C00223

C00156

MAOA

C00601

K12732

K03782
K023371...

K18606

MIF

C12620

C05708

K05708...

C00323

K03782
K023371...

C00601

K12732

K03782
K023371...

K18606

MIF

C12620

C05708

K05708...

C00323

K00588 Benzoate degradation

ALDH3

C00146

K00955

C05607

C02763

C12620

C05708

K05708...

C00323

K00588 Benzoate degradation

C02585
C05142
C00642

C07086

K10437

C05852

C05852

Styrene degradation

C12620

C05708

K05708...

C00323

K00588 Benzoate degradation

C05593

K02614

C06207

K01912

C06207

C06207

C12620

C05708

K05708...

C00323

K00588 Benzoate degradation

C00582

C18361

C15283

C02137

C03735

C00542

Benzoate degradation

C00042

cycle (TCA cycle)

C00596

K18383

C00630

K155
GLYAT

C05598

C04148

K02602

C02062

C02536

C02608

C02608

C02608

C02608

C02608

C00024

C00024

Glycolysis /
Gluconeogenesis

C05598

C04148

K02602

C02062

C02536

C02608

C02608

C02608

C02608

C02608

C00024

C00024

Glycolysis /
Gluconeogenesis

K02615

C00091

C02280

C00074

K01692

C00144

C00024

C00084

C00022

C16666

C18202

K04073

C00024

C06866

Phenylalanine metabolism
MPI-133

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Citrate cycle (TCA cycle)

Glycolysis / Gluconeogenesis

Citrate cycle (TCA cycle)

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C04351

C16719

C01575

DDC

K00270

K00817

K00280

K00824

C05332

C03519

C00830

C05821

C00166

C00423

K00487

C01772

C00811

K01904

C00223

C00156

MAOA

K12732

K03782

K02337

MIF

C12620

C05629

C11457

C01198

C00323

K00588

K03782

K02337

K00955

K18606

HPD

C05607

C12622

C011588

K05712

C00406

K18383

C07303

C02585

C051426

C07086

K10437

C05852

C06207

C12623

C04044

K05713

K18383

C00630

C05593

K02614

C06207

K01912

C00582

C18361

C152836

C0213735

C00542

C00755

C00083

K155

GLYAT

K02602

C0200625

C03669

K02603

K02603

K02603

K02603

K02603

K02603

K02603

K02603

C05593

C04143

C022300

C00741

K01692

C00024

C03589

K01666

C00022

C16666

C18202

K02615

C022300

C00741

K01692

C00024

C00084

K04073

C06866

C00091

Citrate cycle (TCA cycle)

C00024

C06866

Phenylalanine metabolism
MPI-141

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C04351

C16719

C01575

K10775
K13064

C00188

K01450

C01586

C00512

K18860

C05620

K00487

C00423

C01772

C00811

DDC

C03519

K00270
K00817
K00830
K05821

K00817
K00830
K05821

K00280
K00824

K10797

C01198

K01904

C00156

C05332

C00166

MIF

C12620

C05629

C11457

C00223

MAOA

C00601

K12732

K03782
K023371...

K18606

C05607

C12620

C11588

K05712

C00323

K00588

HPD

C00601

K00955

K00146

C05853

C02763

K05712

K05711
K05711

K05712

C00406

C02585
C05142
C00642

C07086

K10437

C05852

C06207

Styrene degradation

C12623

C04044

C00406

C05593

K02614

C06207

K01912

C00596

C00442

C12624

C04479

K05714
K05714

K18383

Valine

C00582

C18361

C15283

C02137

C00542

Benzoate degradation

C00596

C00042

Cycle (TCA cycle)

K18383

C00630

K155
GLYAT

C05593

C04143

K02602

C00062

C00065

C00068

C00068

C00068

C00068

C00068

C00068

C05593

C04143

C02280

C00074

K01692

C00024

C00084

C00022

C00022

C16666

C18202

K02615

C00091

C00024

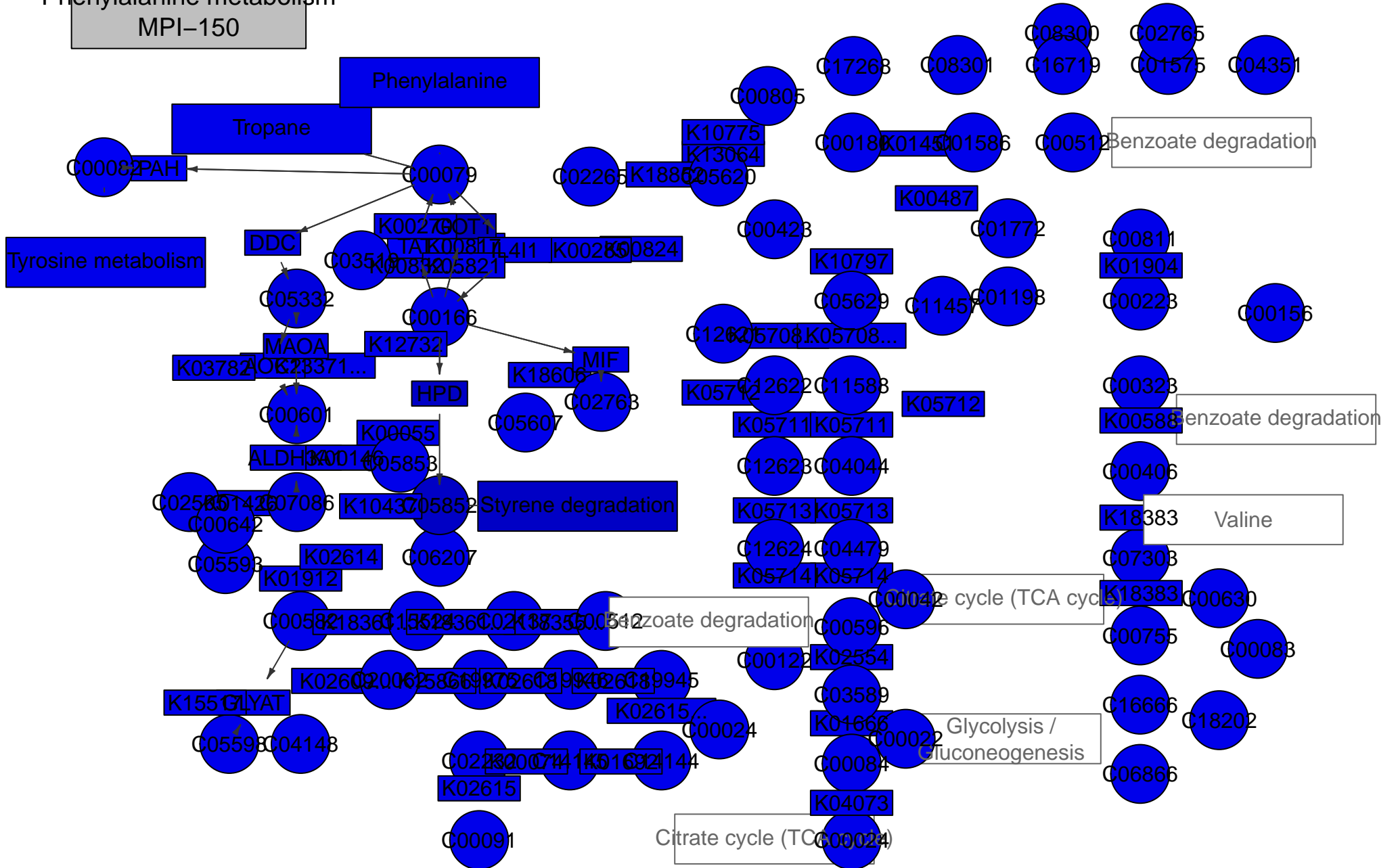
C00024

K04073

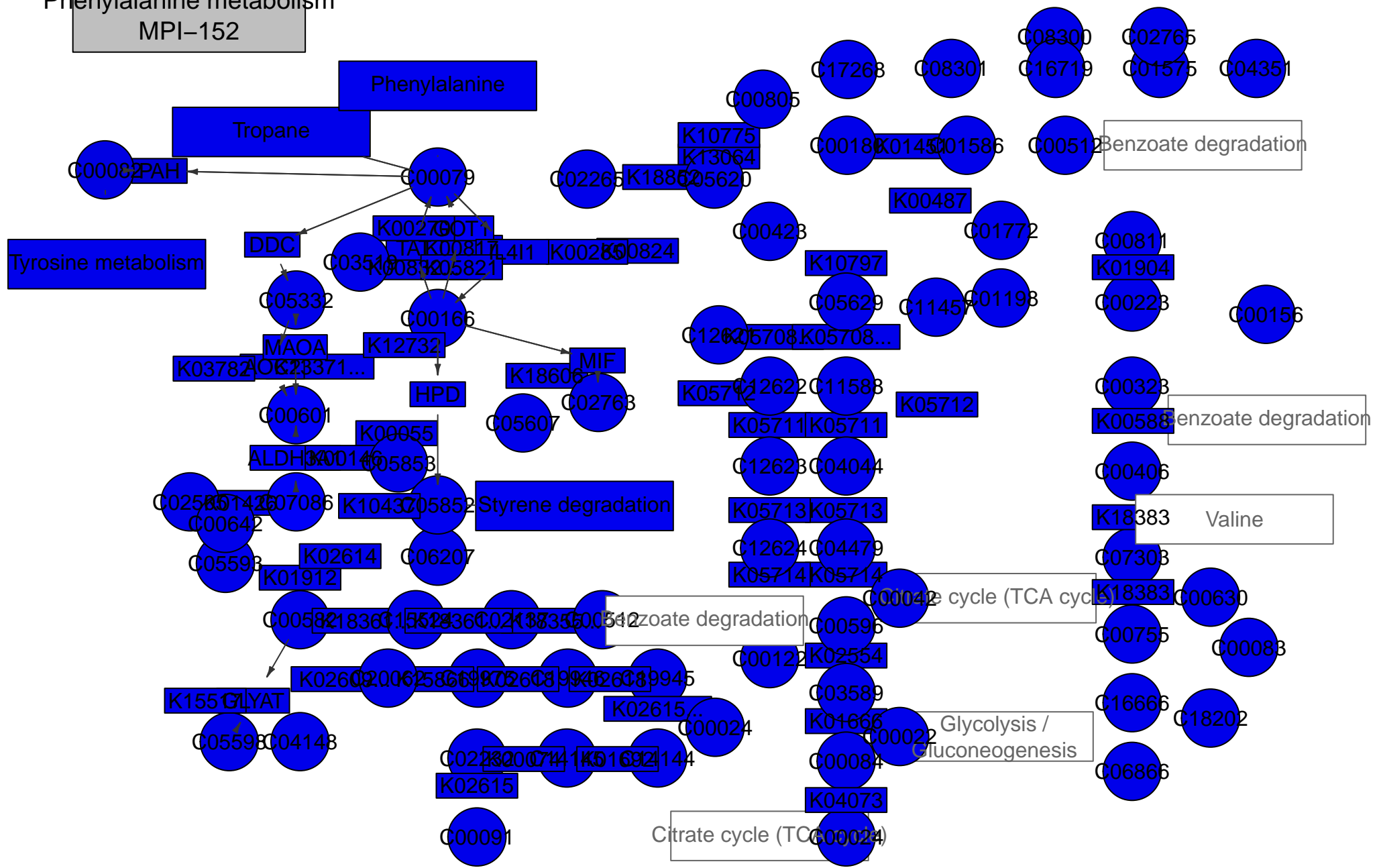
C00024

C06866

Phenylalanine metabolism
MPI-150



Phenylalanine metabolism
MPI-152



Phenylalanine metabolism
MPI-153

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

citrate cycle (TCA cycle)

Glycolysis / Gluconeogenesis

Citrate cycle (TCA cycle)

PAH

DDC

MAOA

HPD

ALDH3

GLYAT

Phenylalanine

Tropane

DDC

MAOA

HPD

ALDH3

GLYAT

Styrene degradation

PAH

MIF

HPD

ALDH3

GLYAT

Benzoate degradation

GLYAT

GLYAT

GLYAT

GLYAT

GLYAT

GLYAT

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GLYAT

Phenylalanine metabolism
MPI-159

Phenylalanine

Tropane

PAH

Tyrosine metabolism

DDC

DOT

TAK

C05332

C00166

MAOA

K12732

MIF

K03782

HPD

K18606

C00601

C05607

ALDH3

K00955

C02763

C02585

C05142

C07086

Styrene degradation

C00642

C05593

C06207

K02614

K01912

C00582

C01836

C01523

C02136

C01373

C00542

Benzoate degradation

K155

GLYAT

C05593

C04143

C02602

C02062

C05369

C02603

C03995

C02230

C02074

C05169

C02144

K02615

K01692

C00024

C00091

Citrate cycle (TC

C17268

C08301

C16719

C02765

C01575

C04351

C00805

K10775

K13064

C00188

K01450

C001586

C00512

Benzoate degradation

C02265

K18860

C05620

K00487

C00423

C01772

C00811

K01904

K10797

C05629

C11457

C01198

C00223

C00156

C12620

C05708

C12622

C11588

C00323

K00588

Benzoate degradation

K05712

K05711

K05711

K05712

C12623

C04044

C00406

K05713

K05713

K18383

Valine

C12624

C04479

K05714

K05714

C07303

K18383

C00630

Citrate cycle (TCA cycle)

C00596

C00755

C00083

C00122

C03589

K01666

C00022

C00084

C16666

C18202

C06866

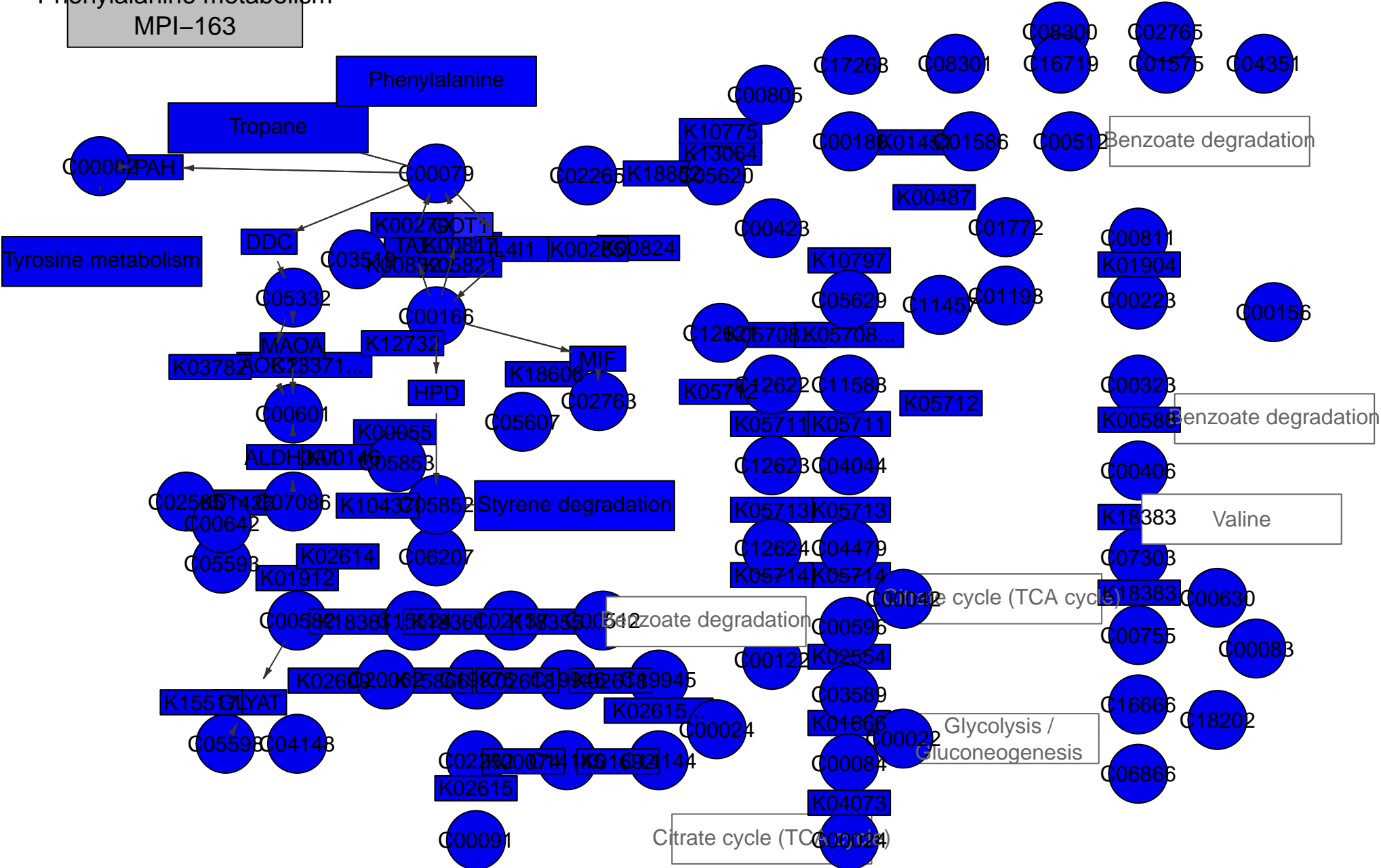
K04073

C00024

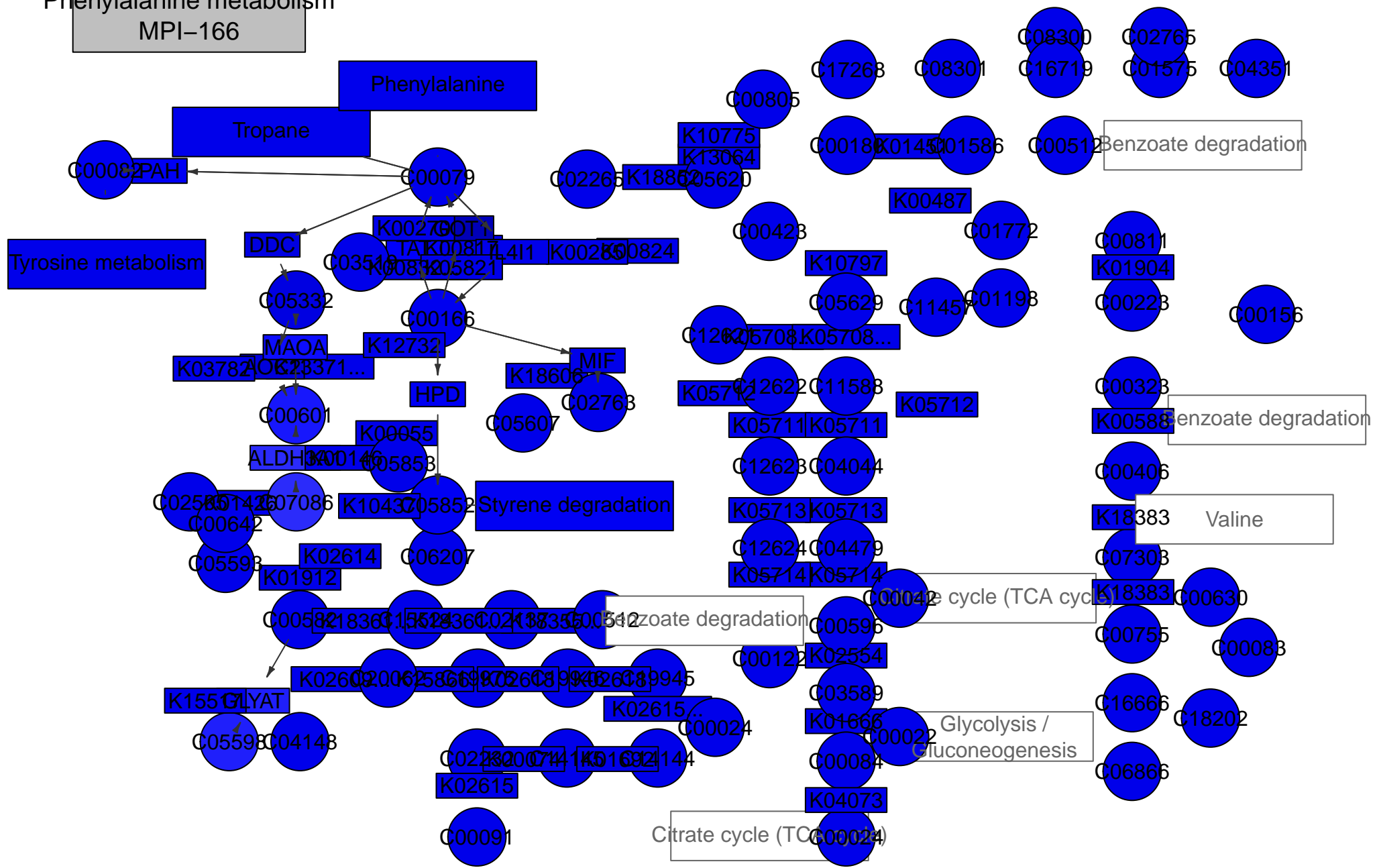
C00024

Citrate cycle (TC

Phenylalanine metabolism
MPI-163



Phenylalanine metabolism
MPI-166



Phenylalanine metabolism
MPI-167

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

citrate cycle (TCA cycle)

Glycolysis /
Gluconeogenesis

Citrate cycle (TCA cycle)

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C04351

C00082

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C04351

K10775
K13064

C00181

K01450

C01586

C00512

Tropane

K00270
GOT1

K00817
L411

K00280
K00824

C00423

K00487

C01772

C00811

K01904

DDC

C03519

K00850
K05821

C00817

K10797

C05629

C11457

C01198

C00223

C00156

C05332

C00166

MIF

C12620

C05708

K05708...

C11457

C00323

MAOA

K03782

K023371...

K12732

K18606

C05607

C02763

K05712

C12622

C11588

K05712

C00323

K00588

C00601

K00955

HPD

C05607

C02763

K05712

C12622

C11588

K05712

K00588

ALDH3

K00146

K05853

C05853

C05607

C02763

K05711

K05711

C12623

C04044

C00406

C02585

C057426

C07086

K10437

K05852

Styrene degradation

K05713

K05713

C12623

C04044

C00406

C02585

C057426

C07086

K10437

K05852

Styrene degradation

K05713

K05713

C12623

C04044

C00406

C05593

K02614

C06207

C06207

C06207

C06207

C12624

C04479

K05714

K05714

C07303

C00582

C18361

C15283

C18360

C02137

C18355

C00542

Benzoate degradation

C00596

C00442

citrate cycle (TCA cycle)

K18383

C00630

K155

GLYAT

C02602

C00625

C03669

K02603

K02603

K02603

K02603

K02603

C00596

C00755

C00083

K155

GLYAT

C02602

C00625

C03669

K02603

K02603

K02603

K02603

K02603

C00596

C00755

C00083

C05593

C04143

C02602

C00625

C03669

K02603

K02603

K02603

K02603

C00024

C03589

K01666

C00022

Glycolysis /
Gluconeogenesis

K02615

C02280

C00074

K01692

C00144

C00084

K04073

C16666

C18202

C06866

C00091

Citrate cycle (TCA cycle)

C00024

Phenylalanine metabolism
MPI-168

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C01575

C04351

K10775
K13064

C00188

K01450

C01586

C00512

K00487

C00423

C01772

C00811

DDC

K00270
K00817
K00830
K00852
K00853
K00854

K00280
K00824

K10797

K01904

C05332

C00166

C05629

C11457

C01198

C00223

C00156

MAOA
K03782
K02337
K02371...

C00601

K12732
HPD

K18606
MIF

C12620

C05708

K05708...

C00323

C00601

K00955
ALDH3
K00146

C05853

C05607

C02763

K05712

C12622

C11588

K05712

C00323

K00588

C02585
K01426

C007086

K10437
K05852

C06207

Styrene degradation

K05711

K05711

C12623

C04044

C00406

C00642

C05593

K02614
K01912

C06207

K05713

K05713

C12624

C04479

C07303

K18383

C00582

K18363

C15283

C02137

C01835

C00542

Benzoate degradation

C00042

Cycle (TCA cycle)

K18383

C00630

K155
GLYAT

C05598

C04143

K02602

C02062

K02603

C00024

C03589

K01666

C00022

C16666

C18202

C02230

C00074

K01692

C02144

C00084

K04073

C06866

K02615

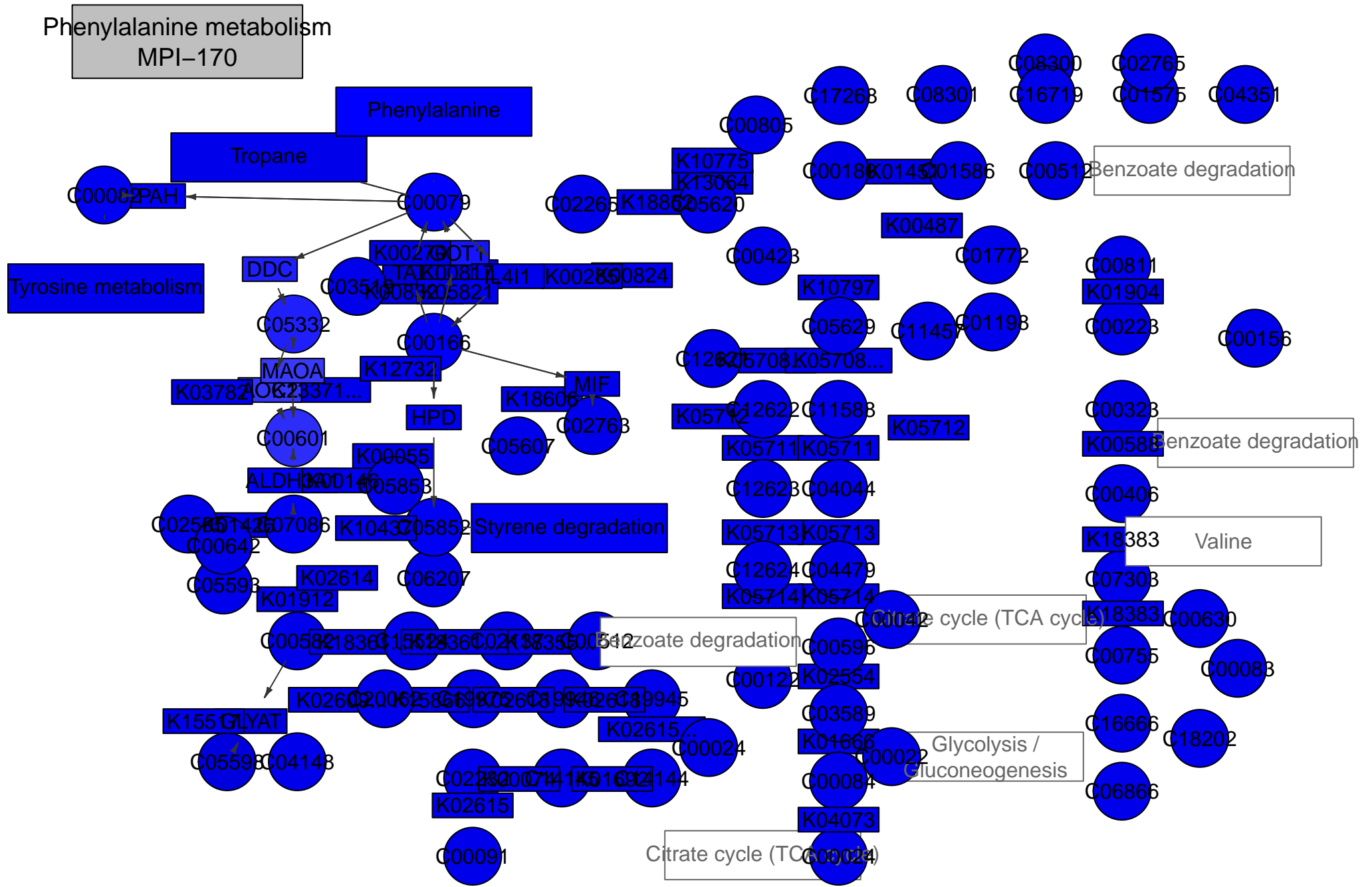
C00091

C00024

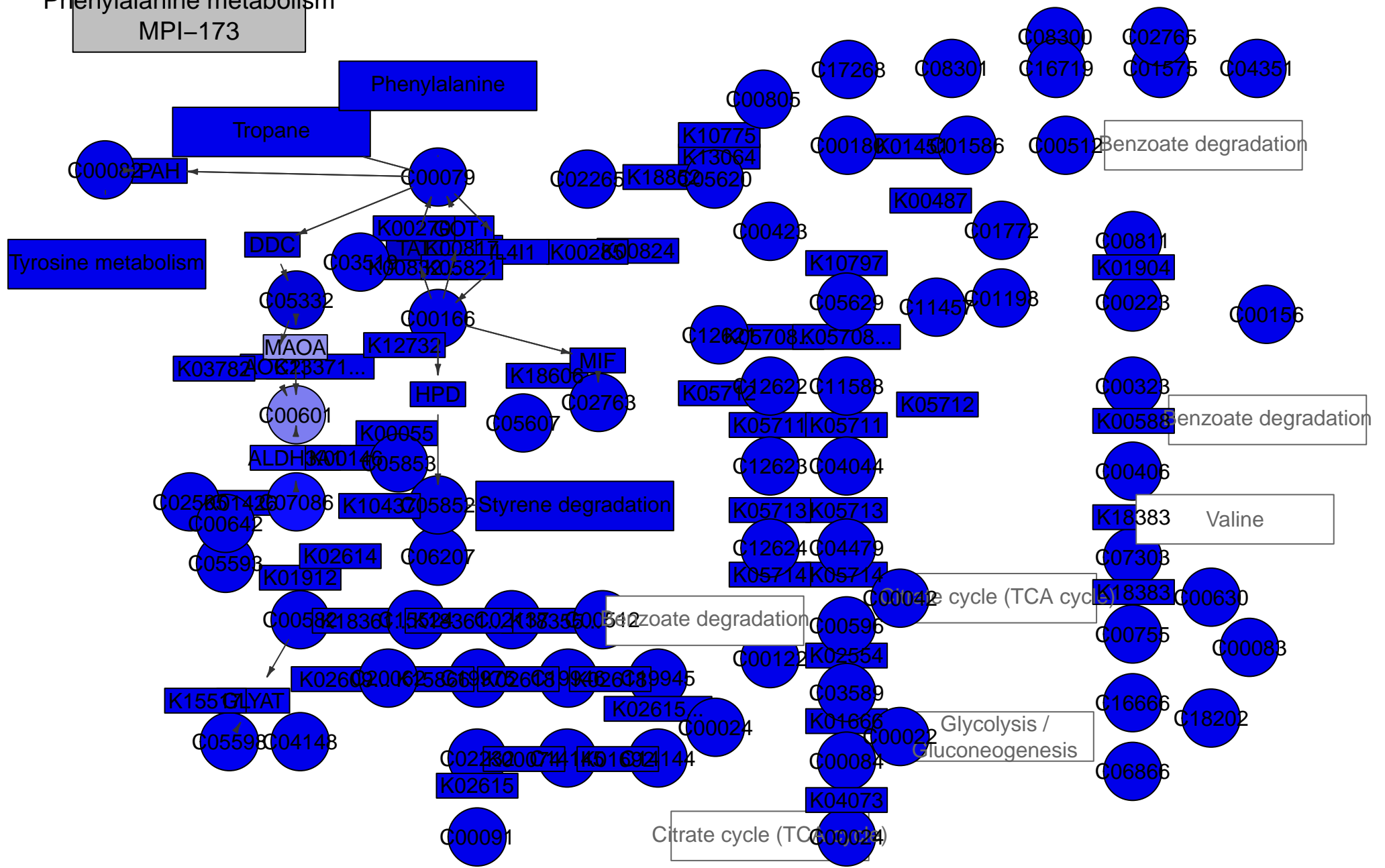
C00024

C00024

C06866



Phenylalanine metabolism
MPI-173



Phenylalanine metabolism
MPI-174

Phenylalanine

Tropane

PAH

Tyrosine metabolism

DDC

GOT

TAK

MAOA

K12732

MIF

HPD

K18606

C00601

K00955

ALDH3

K00146

Styrene degradation

C02585

C05142

C07086

C05852

C00642

C05593

C06207

Benzoate degradation

C00582

C18361

C15283

C02137

C03735

C00542

K155 GLYAT

K02602

C00062

C02536

C07261

C03994

C03995

C05598

C04148

C02280

C00074

C05169

C02144

K02615

C00091

C02280

C00074

C05169

C02144

Citrate cycle (TC

C00024

C00805

C17268

C08301

C16719

C08300

C02765

C01575

C04351

K10775

K13064

C00188

K01450

C001586

C00512

Benzoate degradation

C02265

K18860

C05620

K00487

C00423

C01772

C00811

K01904

C05332

C03519

C00830

C05821

C00817

C07411

K00280

C00824

K10797

C05629

C11457

C01198

C00223

C00156

C12620

C05708

K05708

C00323

K00588

Benzoate degradation

K05712

C12622

C011588

K05712

C00406

K00588

Benzoate degradation

C00601

K00955

C05853

C00146

C05852

C04044

C12623

C04044

C00406

K18383

Valine

C02585

C05142

C07086

C05852

C06207

C05852

C04044

C12623

C04044

C07303

K18383

Valine

C05593

K02614

C06207

K01912

C06207

C06207

C12624

C04479

K05714

K05714

C00042

Citrate cycle (TCA cycle)

K18383

C00630

C00582

C18361

C15283

C02137

C03735

C00542

C00596

C00042

Citrate cycle (TCA cycle)

C00596

C00755

C00088

K155 GLYAT

C00062

C02536

C07261

C03994

C03995

C00122

K02554

C00596

C00042

Citrate cycle (TCA cycle)

C00596

C00755

C05598

C04148

C02280

C00074

C05169

C02144

C00024

K01666

C00022

Glycolysis / Gluconeogenesis

C16666

C18202

K02615

C00091

C02280

C00074

C05169

C02144

C00024

K01666

C00022

Glycolysis / Gluconeogenesis

C16666

C18202

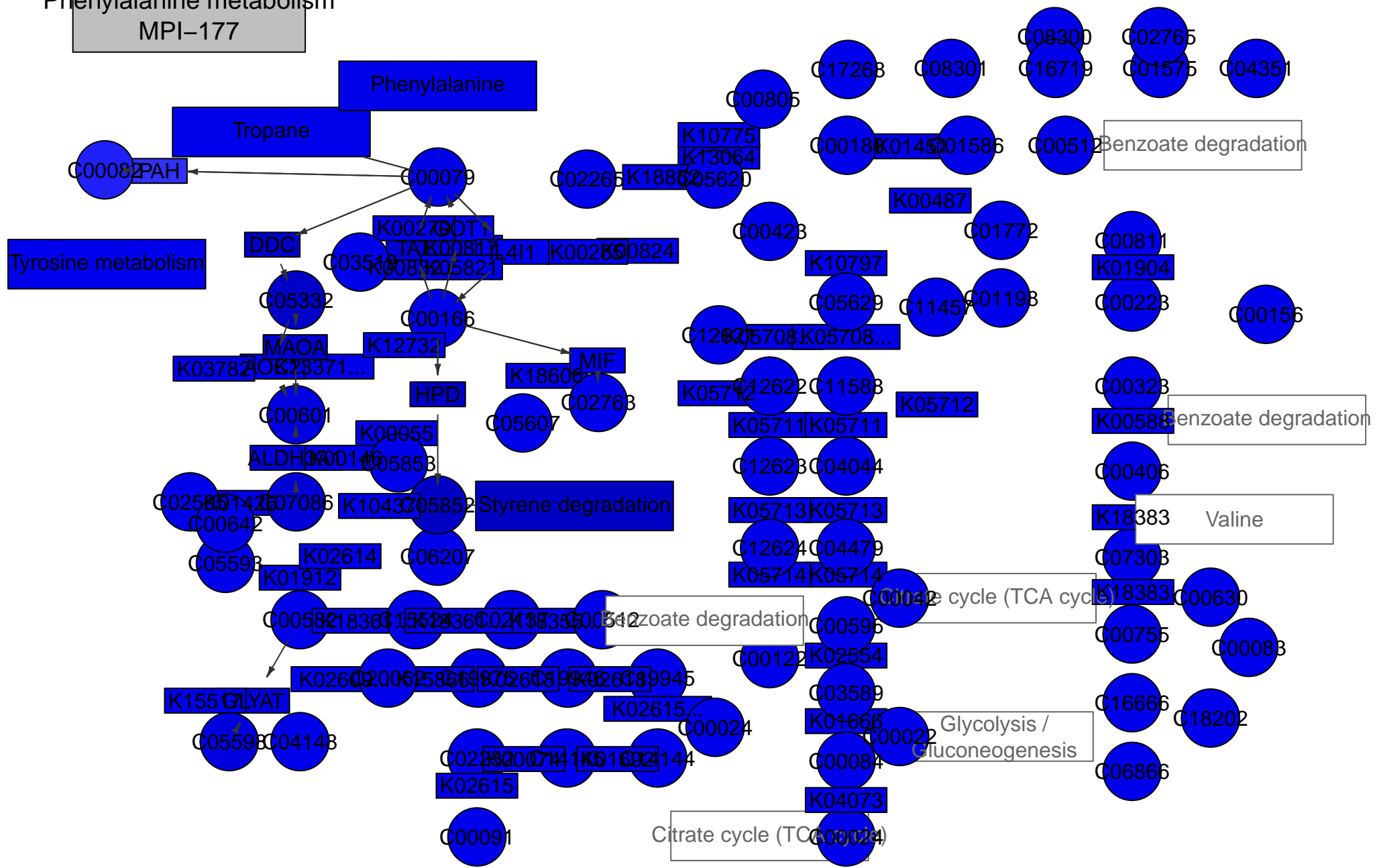
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C00024

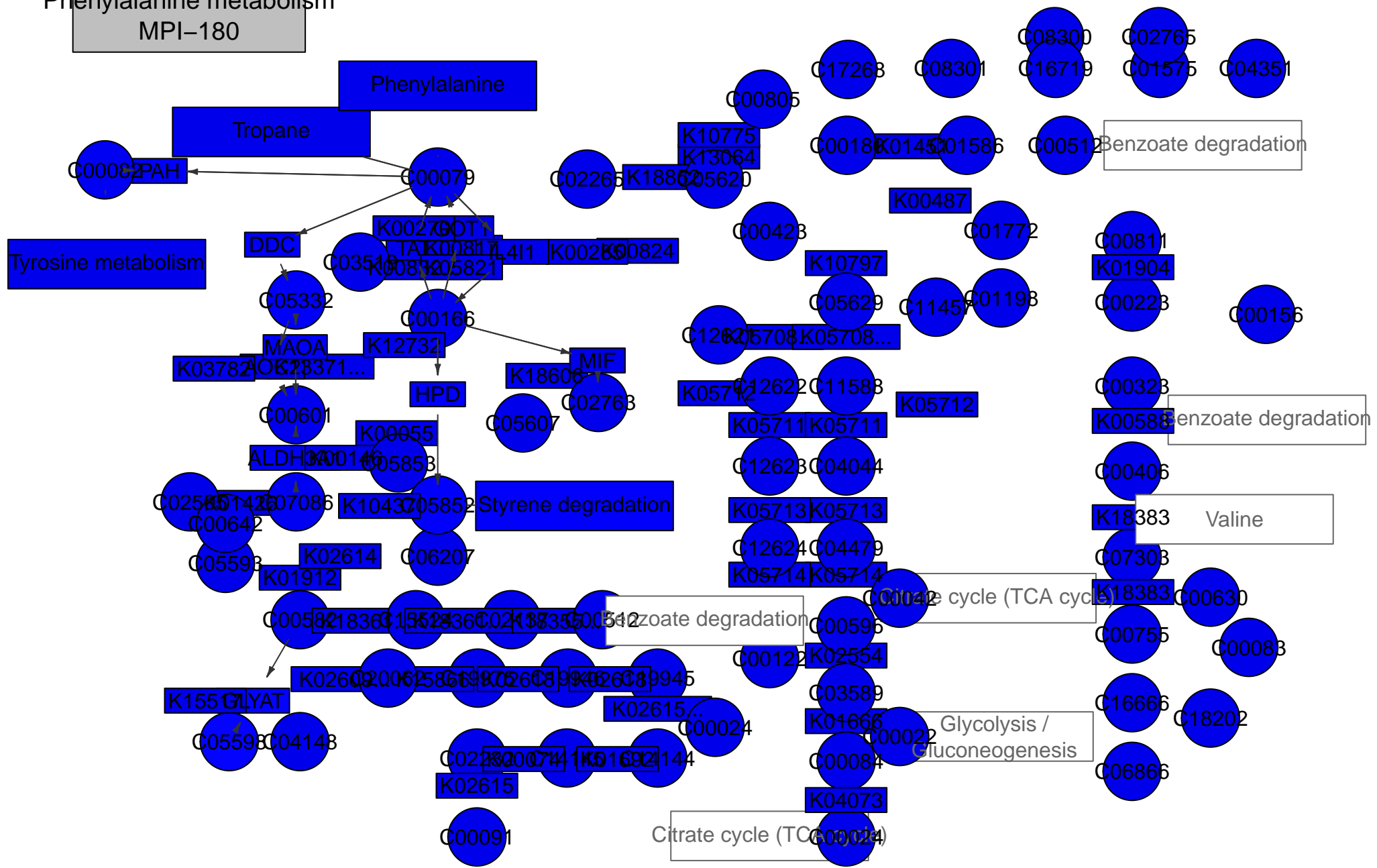
Citrate cycle (TC

C00024

Phenylalanine metabolism
MPI-177



Phenylalanine metabolism
MPI-180



Phenylalanine metabolism
MPI-182

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Citrate cycle (TCA cycle)

Glycolysis / Gluconeogenesis

Citrate cycle (TCA cycle)

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C04351

C01575

C00512

C00181

C01450

C01586

K10775

K13064

K18860

C05620

K00487

C00423

C01772

C00811

K01904

DDC

K00270

C03519

K00817

C05821

K00817

C05821

K00280

C00824

K10797

C05629

C11457

C01198

C00223

C00156

C05332

C00166

MIF

C12620

C05708

K05708

MAOA

C00601

K12732

K03782

K02337

K02337

C12622

C01158

C00323

K00588

HPD

C05607

C02763

K05712

K05711

K05711

K05712

ALDH3

C00146

K00955

C05853

C12623

C04044

C00406

C02585

C05142

C07086

C00642

C05593

C06207

C12623

C04044

C00406

K10437

C05852

C06207

Styrene degradation

K05713

K05713

K18383

Valine

C05593

K02614

C06207

C12624

C04479

K05714

K05714

C07303

C00582

C18361

C15283

C02137

C03735

C00542

C00596

C00042

Citrate cycle (TCA cycle)

K18383

C00630

K155

C05593

C04143

C02062

C00625

C03669

C02608

C03995

C02608

C03995

C00755

C00083

K02602

C00625

C03669

K02608

C03995

C00122

K02554

C03589

C00022

C16666

C18202

C05593

C04143

C02280

C00074

K01692

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C00022

C16666

C18202

K02615

C02280

C00074

K01692

C00024

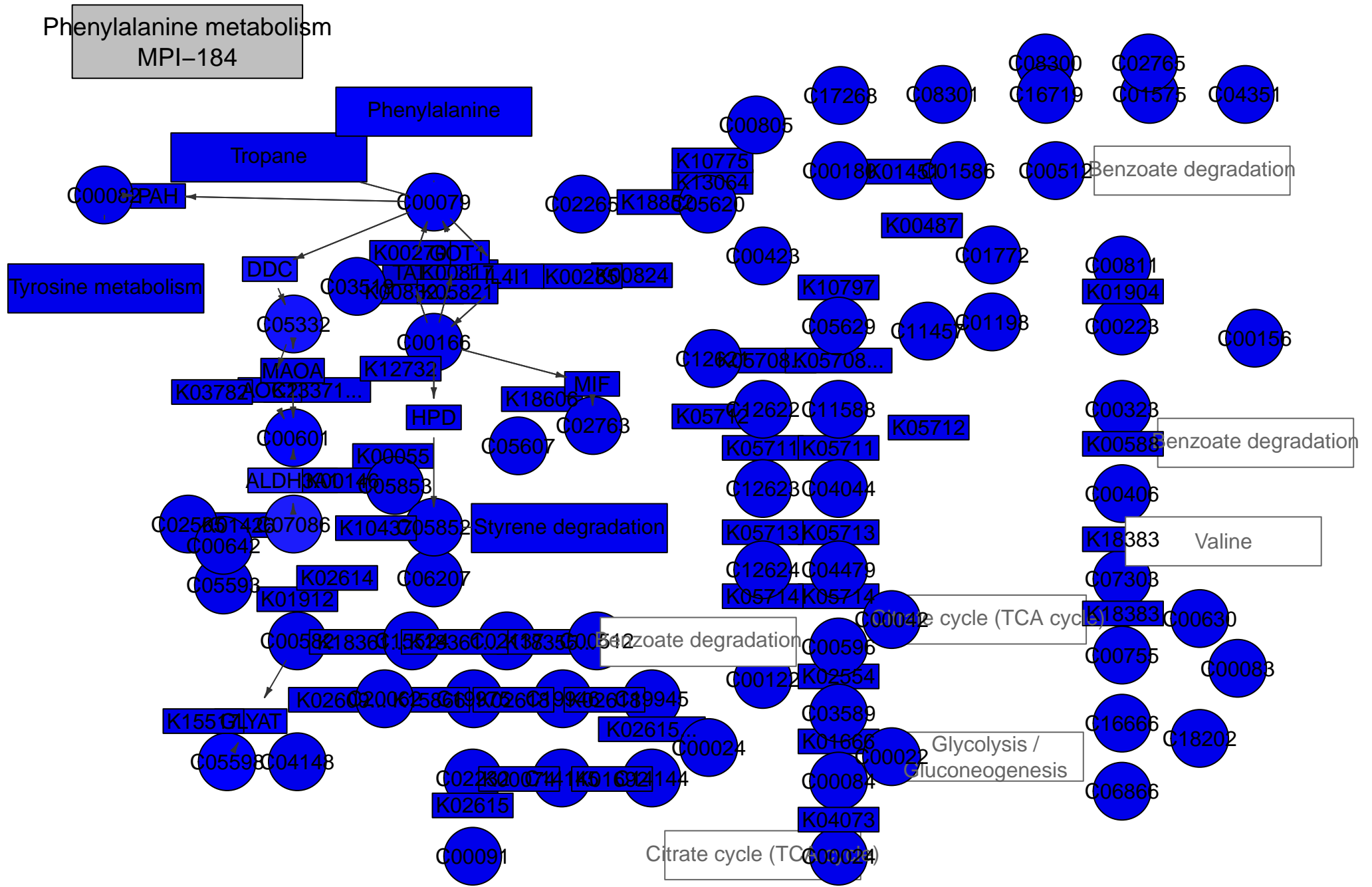
K04073

C06866

C00091

Citrate cycle (TCA cycle)

C00024



Phenylalanine metabolism
MPI-188

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300
C16719

C02765
C01575

C04351

K10775
K13064

C00188

K01450

C01586

C00512

K18860

C05620

K00487

C00423

C01772

C00811

DDC

C03519

K00270
K00817
K00830
K00852
K00824

C00817
K00280

C00824

K10797

C01198

K01904

C00156

C05332

C00166

MIF

C12620

C05629

C11457

C01198

C00223

MAOA

C00601

K12732

HPD

C05607

C02763

C12620

C11588

K05712

C00323

K03782

K02337

K00955

K18606

C05607

C02763

K05712

K05711

K05711

K05712

K00588

ALDH3

C00146

C05853

C05852

C06207

C06207

C12623

C04044

K05713

K05713

C00406

C02585
C05142
C00642

C07086

K10437

C05852

C06207

C06207

K05713

K05713

C12624

C04479

K18383

Valine

C05593

K02614

C06207

C06207

C06207

C06207

C12624

C04479

K05714

K05714

C07303

C00630

C00582

C18361

C15283

C02137

C03735

C00542

C00596

C00042

Cycle (TCA cycle)

C00630

C00630

K155
GLYAT

C05593

C04143

K02602

C00162

C03669

C00024

C03589

K01666

C00022

C16666

C18202

C02280

C00074

K01692

C00144

C00084

K04073

C06866

K02615

C00091

C00024

C00024

C00024

C06866

Phenylalanine metabolism
MPI-189

Phenylalanine

Tropane

PAH

Tyrosine metabolism

DDC

GOT1

TAK

MAOA

K12732

MIF

HPD

K18606

C00601

K00955

C05607

ALDH3

K00146

Styrene degradation

C02585

C05142

C07086

C05852

C00642

C05593

C02614

C06207

K01912

C00582

C01836

C01523

C01336

C00542

K155 GLYAT

C02602

C00062

C05369

C02603

C02608

C02608

C02608

C02608

C02608

C02608

C05593

C04143

K02615

C02230

C00074

C05169

C02144

C00024

C03589

K01666

C00022

C00084

C16666

C18202

C00091

Citrate cycle (TC

K04073

C00024

C00805

C17268

C08301

C16719

C08300

C02765

C01575

C04351

K10775

K13064

C00188

K01450

C001586

C00512

Benzoate degradation

C02265

K18860

C05620

K00487

C00423

C01772

C00811

K01904

C05332

C03519

C00830

C05821

K10797

C11457

C01198

C00223

C00156

C12620

C05629

K05708...

C00323

K00588

Benzoate degradation

K03782

K023371...

K18606

K05712

C12622

C11588

C00323

K00588

Benzoate degradation

C00601

K00955

C05607

K05711

K05711

K05712

C00406

K00588

Benzoate degradation

C02585

C05142

C07086

C05852

C05852

C12623

C04044

C00406

K18383

Valine

C05593

K02614

C06207

K05713

K05713

C07303

K18383

Valine

C00582

C01836

C01523

C01336

C00542

C00596

C00042

Cycle (TCA cycle)

K18383

C00630

K155 GLYAT

C02602

C00062

C05369

C02603

C02608

C02608

C02608

C02608

C02608

C02608

C05593

C04143

K02615

C02230

C00074

C05169

C02144

C00024

C03589

K01666

C00022

C00084

C16666

C18202

C00091

Citrate cycle (TC

K04073

C00024

C00805

C17268

C08301

C16719

C08300

C02765

C01575

C04351

K10775

K13064

C00188

K01450

C001586

C00512

Benzoate degradation

C02265

K18860

C05620

K00487

C00423

C01772

C00811

K01904

C05332

C03519

C00830

C05821

K10797

C11457

C01198

C00223

C00156

C12620

C05629

K05708...

C00323

K00588

Benzoate degradation

K03782

K023371...

K18606

K05712

C12622

C11588

C00323

K00588

Benzoate degradation

C00601

K00955

C05607

K05711

K05711

K05712

C00406

K00588

Benzoate degradation

C02585

C05142

C07086

C05852

C05852

C12623

C04044

C00406

K18383

Valine

C05593

K02614

C06207

K05713

K05713

C07303

K18383

Valine

C00582

C01836

C01523

C01336

C00542

C00596

C00042

Cycle (TCA cycle)

K18383

C00630

K155 GLYAT

C02602

C00062

C05369

C02603

C02608

C02608

C02608

C02608

C02608

C02608

C05593

C04143

K02615

C02230

C00074

C05169

C02144

C00024

C03589

K01666

C00022

C00084

C16666

C18202

C00091

Citrate cycle (TC

K04073

C00024

Phenylalanine metabolism
MPI-190

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C04351

C16719

C01575

C00079

K10775
K13064

C00188

K01450

C01586

C00512

C00082 PAH

C02265

K18860

C05620

K00487

C00423

C01772

DDC

C03519

K00270
K00817
K00830
K05821

K00817
K00830
K05821

K00280
K00824

K10797

C00811

K01904

C05332

C00166

C05629

C11457

C01198

C00223

C00156

MAOA

C00601

K12732

K03782
K023371...

MIF

C05607

C12622

C11588

C00323

K03782
K023371...

HPD

K18606

C02763

K05712

K05712

C00588

C00601

K00955

C05607

K05711
K05711

K05711
K05711

K00588

C02585
C05142
C00642

C07086

K10437

C05852

C05852

Styrene degradation

C12623

C04044

C00406

C02585
C05142
C00642

C07086

K10437

C05852

C05852

Styrene degradation

K05713
K05713

K05713
K05713

K18383

C05593

K02614

C06207

C06207

C00042

C00042

C12624

C04479

K05714
K05714

C07303

C05593

K02614

C06207

C06207

C00042

C00042

K05714
K05714

C00042

K18383

C00582

C18361

C15283

C02137

C03735

C00542

C00596

C00122

K02554

C00755

C00083

C00582

C18361

C15283

C02137

C03735

C00542

C00596

C00122

K02554

C00755

C00083

K155
GLYAT

C05593

C02062

C00625

C03669

K02608

C00024

C03589

K01666

C16666

C18202

K155
GLYAT

C05593

C02062

C00625

C03669

K02608

C00024

C03589

K01666

C16666

C18202

C05593

C04143

C02280

C00074

K01692

C00024

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C04143

C02280

C00074

K01692

C00024

C00084

K04073

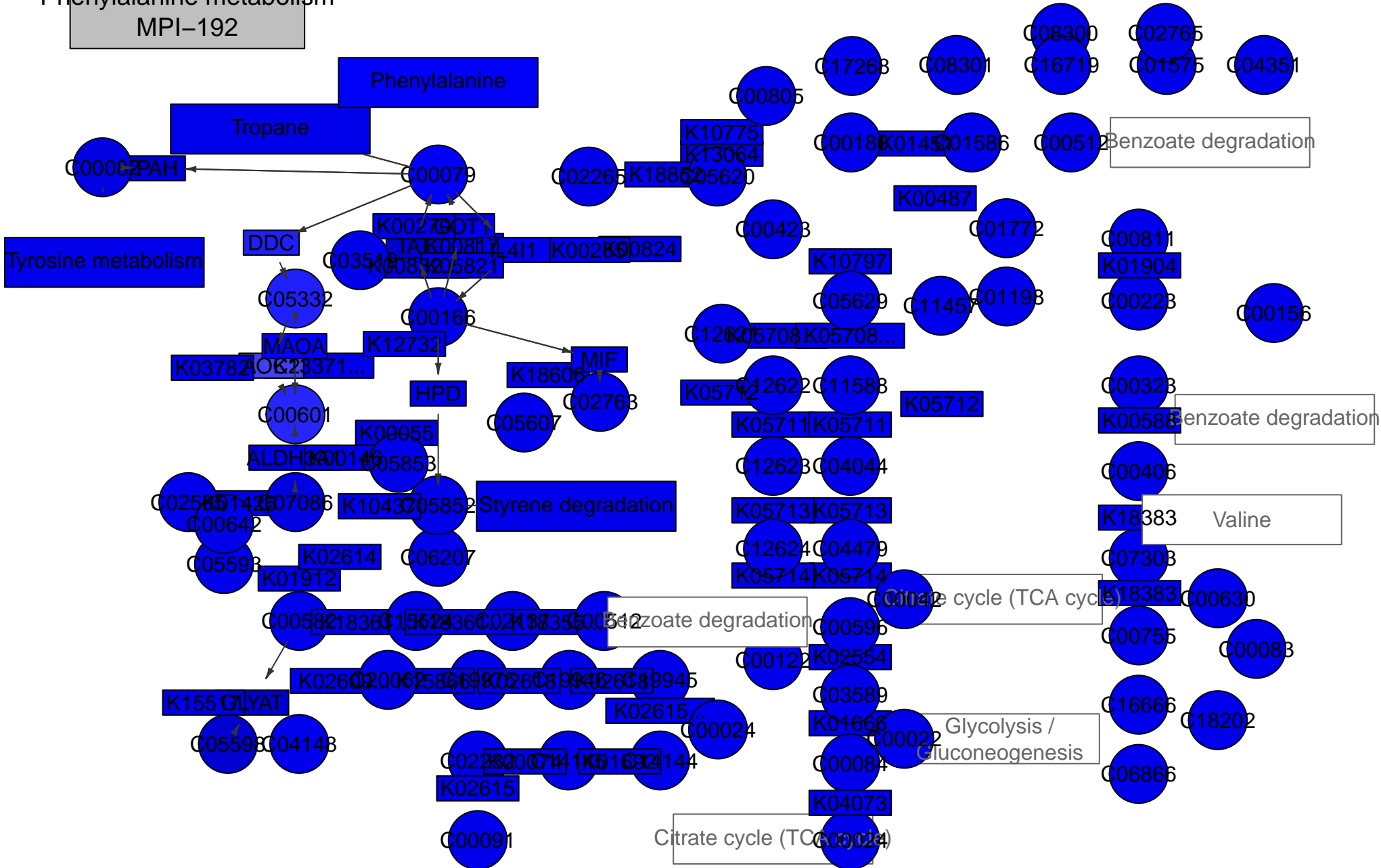
C06866

C00091

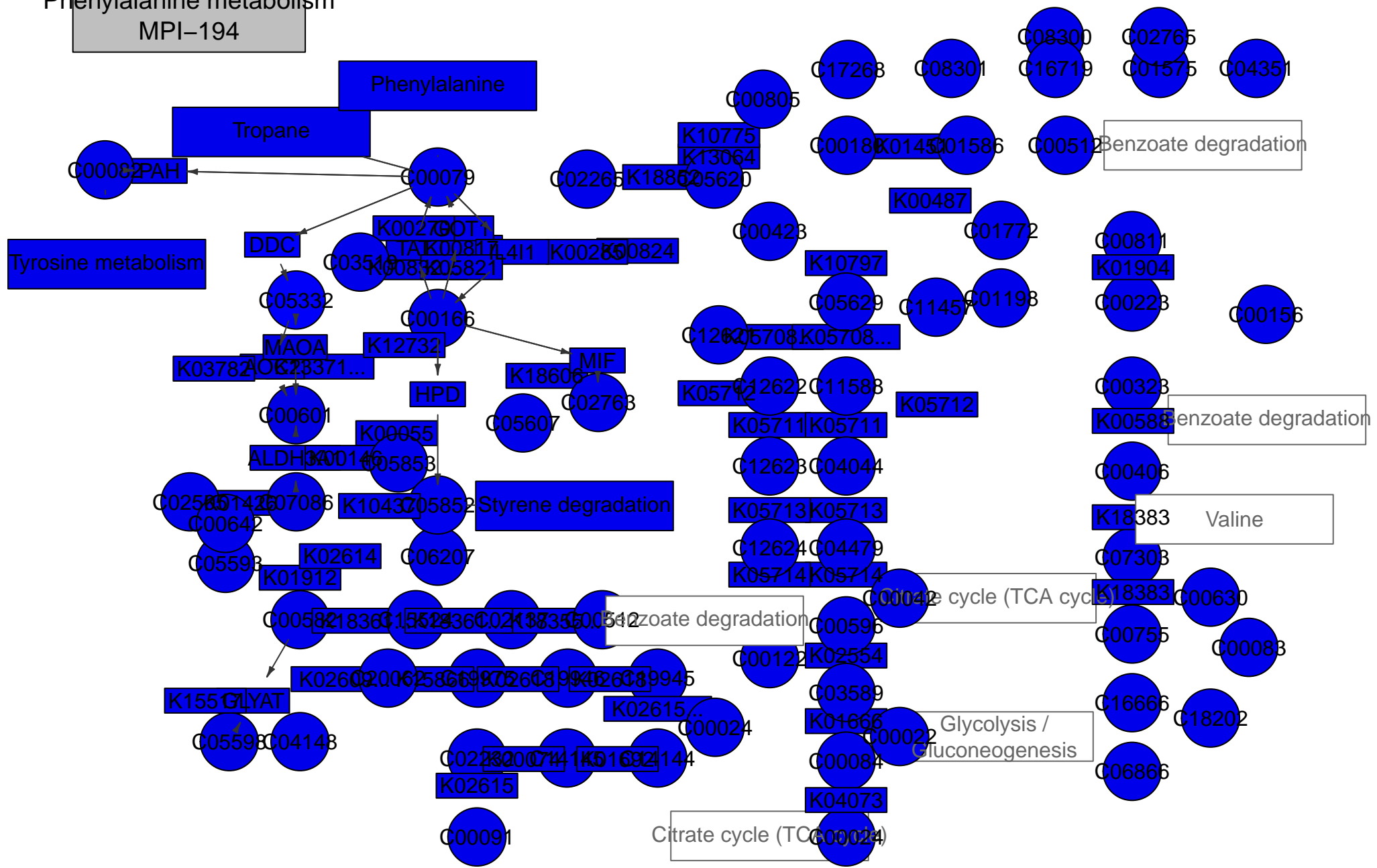
Citrate cycle (TC

C00024

Phenylalanine metabolism
MPI-192



Phenylalanine metabolism
MPI-194



Phenylalanine metabolism
MPI-196

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C01575

C04351

K10775
K13064

C00188

K01450

C01586

C00512

K00487

C00423

C01772

C00811

DDC

K00270
GOT1

K00817
TAK

K00280
L411

K00280
K00824

C03519

K00830
K005821

K10797

C01198

C00223

C00156

C05332

C00166

MIF

C12620

C05629

C11457

C01198

MAOA

K03782
K023371...

K12732

K00955

K18606

C05607

C12622

C11588

K05712

K05712

C00323

K00588

K03782
K023371...

C00601

K00955

K00146

K10437

C05852

K05712

C12622

C11588

K05711

K05711

C00406

C02585
K01426

C007086

K10437

C05852

C06207

Styrene degradation

K05713

K05713

C00406

C00642

C05593

K02614

C06207

K01912

C00596

C12623

C04044

K05713

K05713

C07303

K18383

Valine

C00582

C18361

C15283

C02137

C18355

C00542

Benzoate degradation

C00042

Cycle (TCA cycle)

K18383

C00630

K155
GLYAT

C05593

C04143

K02602

C00062

C00065

C00068

C00068

C00068

C00068

C00068

C00068

C00068

C05593

C04143

C02280

C00074

K01692

C00024

C00084

C00022

C00022

C16666

C18202

K02615

C02280

C00074

K01692

C00024

C00084

K04073

C06866

C00091

Citrate cycle (TC

C00024

C06866

Phenylalanine metabolism
MPI-200

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Citrate cycle (TCA cycle)

Glycolysis / Gluconeogenesis

Citrate cycle (TCA cycle)

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C04351

C16719

C01575

C00082 PAH

DDC

C03519

C05821

C00817

C00824

C02265

C05620

C00188

C01450

C01586

C00512

C05332

C00166

C00817

C00824

C00280

C00423

C01772

C01772

C01772

C00811

C001904

C00223

C00156

C03782

C00601

C00146

C05853

C05607

C02763

C12620

C05629

C11457

C01198

C00323

C00588

C00406

C00601

C00146

C05853

C05607

C02763

C12620

C05629

C11457

C01198

C00323

C00588

C00406

C02585

C05142

C07086

C00642

C05593

C06207

C12623

C04044

C12623

C04044

C00406

C18383

C07303

C02585

C05142

C07086

C00642

C05593

C06207

C12623

C04044

C12623

C04044

C00406

C18383

C07303

C00582

C01836

C01523

C01360

C02137

C01835

C00542

C00596

C00042

C00042

C00630

C00755

C00083

C00582

C01836

C01523

C01360

C02137

C01835

C00542

C00596

C00042

C00042

C00630

C00755

C00083

C05593

C04143

C02602

C00625

C03669

C02603

C02603

C03995

C03589

C00024

C01666

C00022

C16666

C05593

C04143

C02602

C00625

C03669

C02603

C02603

C03995

C03589

C00024

C01666

C00022

C16666

C05593

C04143

C02602

C00625

C03669

C02603

C02603

C03995

C00024

C01666

C00022

C16666

C18202

C02602

C00625

C03669

C02603

C02603

C03995

C00084

C06866

C02602

C00625

C03669

C02603

C02603

C03995

C00084

C06866

C00091

C02602

C00625

C03669

C02603

C02603

C03995

C00024

C00024

C00091

C02602

C00625

C03669

C02603

C02603

C03995

C00024

C00024

Phenylalanine metabolism
MPI-202

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C04351

C01575

C00512

C00181

C01450

C01586

K10775

K13064

K18860

C05620

K00487

C00423

C01772

C00811

K01904

DDC

C03519

K00270

GOT1

K00817

L411

K00280

C00824

C05821

K00830

C05821

K10797

C05332

C00166

C05629

C11457

C01198

C00223

C00156

MAOA

K12732

MIF

K03782

K02337

K18606

C12620

C05708

K05708

C00323

K00588

C00601

HPD

C05607

C02763

K05712

C12622

C11588

K05712

C00406

ALDH3

K00955

C00146

C05853

K05711

K05711

C00406

C02585

C05142

C07086

K10437

C05852

Styrene degradation

C12623

C04044

C07303

C00642

C05593

K02614

C06207

K05713

K05713

K18383

Valine

C05593

K01912

C00582

C18361

C15233

C02137

C18355

C00542

Benzoate degradation

C00042

Cycle (TCA cycle)

K18383

C00630

K155

GLYAT

C02602

C00625

C05369

K02603

C09945

K02603

C00596

C00122

K02554

C00755

C00083

C05593

C04143

C02230

C00074

K01692

C00024

C03589

K01666

C00022

C16666

C18202

K02615

C02230

C00074

K01692

C00084

K04073

C06866

C00091

Citrate cycle (TC

C00024

Phenylalanine metabolism
MPI-204

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

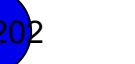
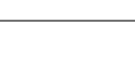
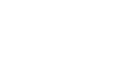
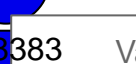
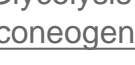
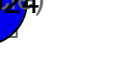
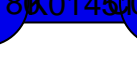
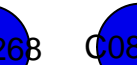
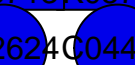
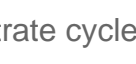
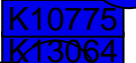
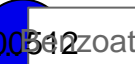
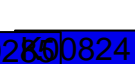
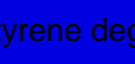
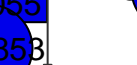
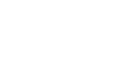
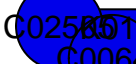
Benzoate degradation

Valine

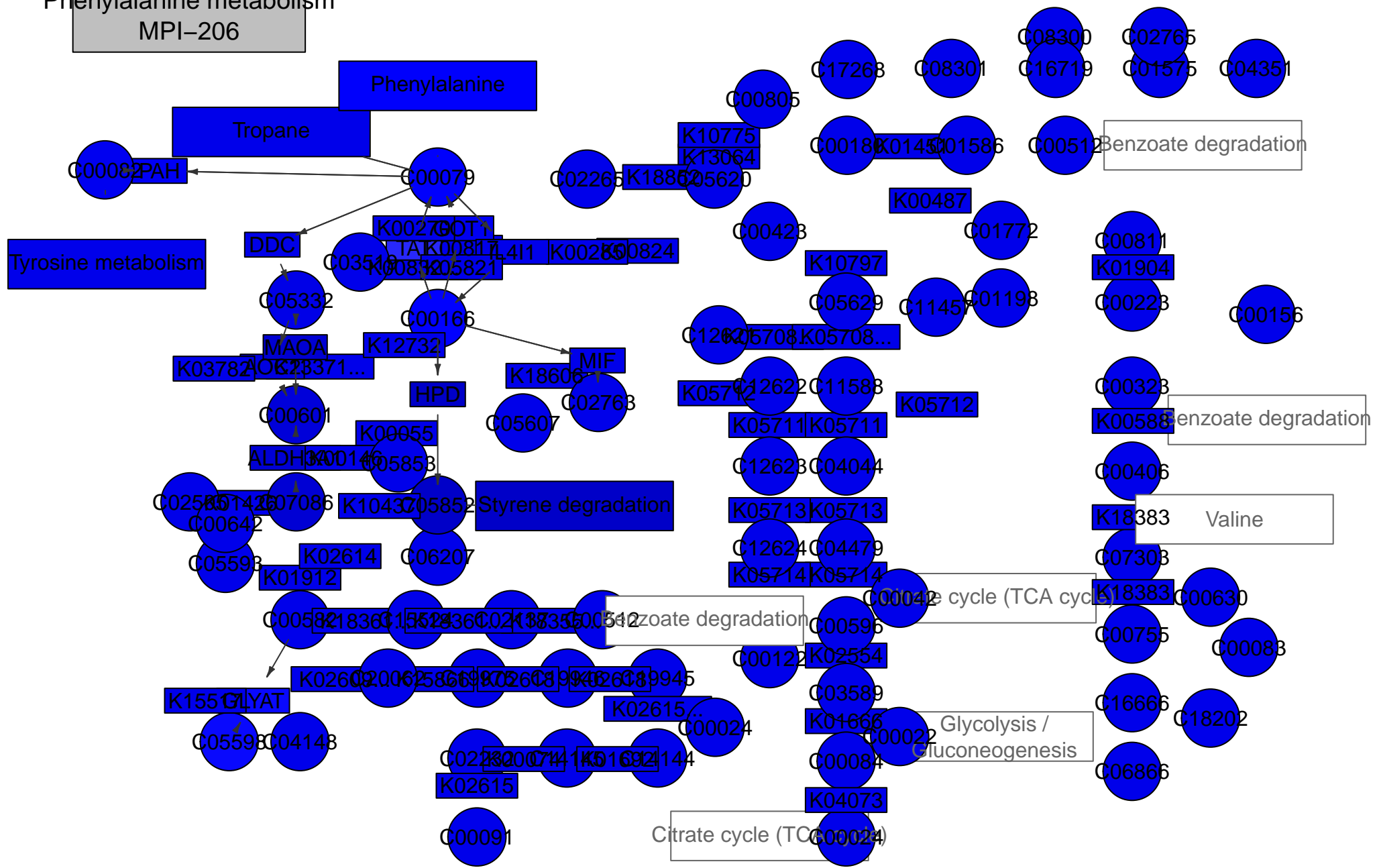
Benzoate degradation

Glycolysis /
Gluconeogenesis

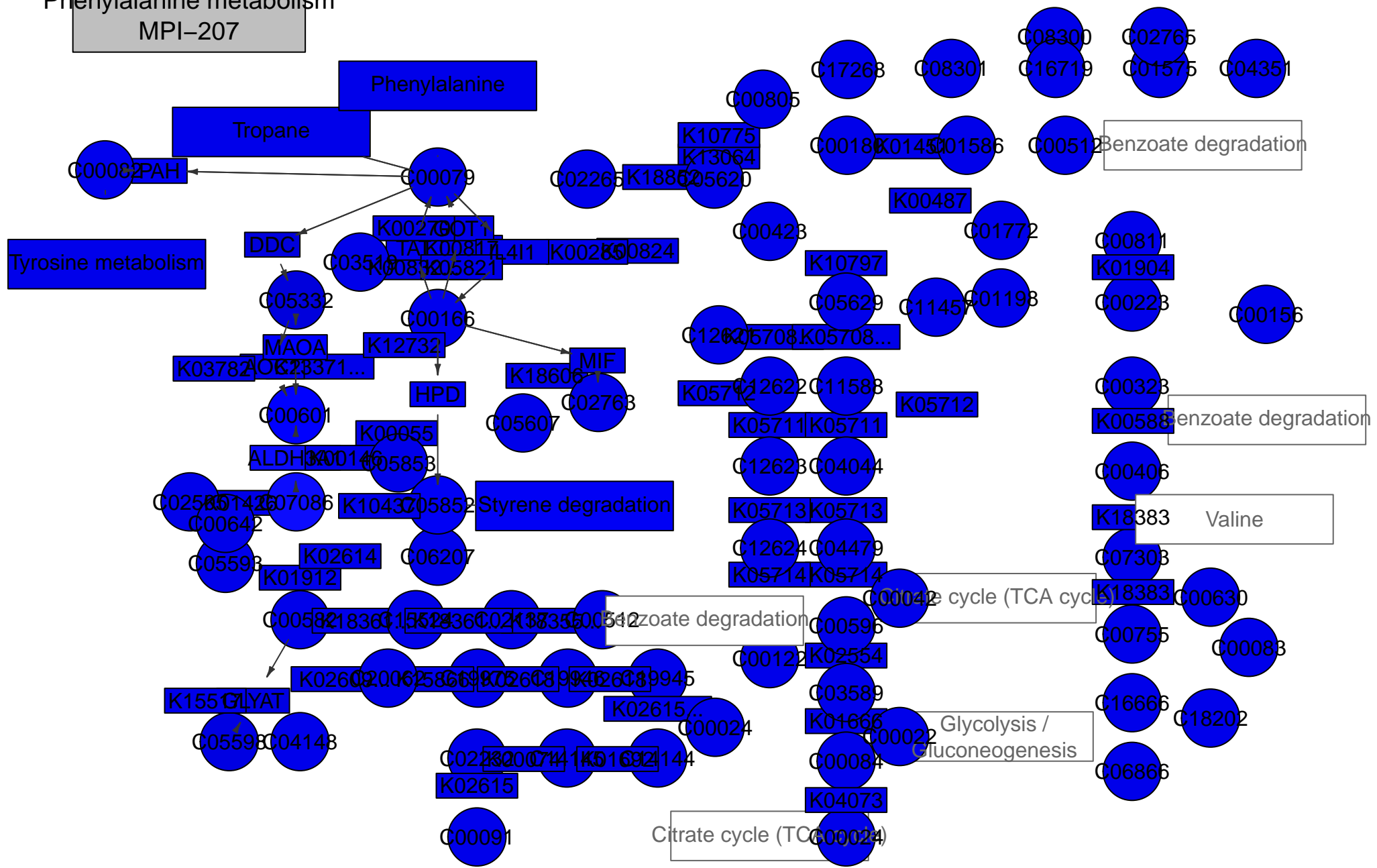
Citrate cycle (TC



Phenylalanine metabolism
MPI-206



Phenylalanine metabolism
MPI-207



Phenylalanine metabolism
MPI-208

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C04351

C01575

C16719

C00512

C00181

C01450

C01586

K10775

K13064

K18860

C05620

K00487

C00423

C01772

C00811

K01904

DDC

C03519

K00270

GOT1

K00817

L411

K00280

K00824

K10797

C11457

C01198

C00223

C00156

C05332

C00166

MIF

C12620

C05629

C11457

C01198

MAOA

K03782

K02337

K12732

K02337

K02337

K05708

K05708

K05708

K05708

K05708

K05708

K05708

K03782

K02337

K12732

K02337

K02337

K05708

K05708

K05708

K05708

K05708

K05708

K05708

K05708

C00601

HPD

K18606

C05607

C02763

K05712

C12622

C11588

C00323

K00588

ALDH3

K00146

K05853

K00955

K00146

K05853

K05711

K05711

K05711

K05711

K05711

K05711

K05711

C02585

C05142

C07086

C00642

C05593

C06207

C12623

C04044

C12623

C04044

C00406

K18383

Valine

C02585

C05142

C07086

C00642

C05593

C06207

C12623

C04044

C12623

C04044

C00406

K18383

Valine

C02585

C05142

C07086

C00642

C05593

C06207

C12623

C04044

C12623

C04044

C00406

K18383

Valine

C02585

C05142

C07086

C00642

C05593

C06207

C12623

C04044

C12623

C04044

C00406

K18383

Valine

C02585

C05142

C07086

C00642

C05593

C06207

C12623

C04044

C12623

C04044

C00406

K18383

Valine

C02585

C05142

C07086

C00642

C05593

C06207

C12623

C04044

C12623

C04044

C00406

K18383

Valine

C02585

C05142

C07086

C00642

C05593

C06207

C12623

C04044

C12623

C04044

C00406

K18383

Valine

C02585

C05142

C07086

C00642

C05593

C06207

C12623

C04044

C12623

C04044

C00406

K18383

Valine

C02585

C05142

C07086

C00642

C05593

C06207

C12623

C04044

C12623

C04044

C00406

K18383

Valine

C02585

C05142

C07086

C00642

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C12623

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C00406

K18383

Valine

C02585

C05142

C07086

C00642

C05593

C06207

C12623

C04044

C12623

C04044

C00406

K18383

Valine

C02585

C05142

C07086

C00642

C05593

C06207

C12623

C04044

C12623

C04044

C00406

K18383

Valine

C02585

C05142

C07086

C00642

C05593

C06207

C12623

C04044

C12623

C04044

C00406

K18383

Valine

C02585

C05142

C07086

C00642

C05593

C06207

C12623

C04044

C12623

C04044

C00406

K18383

Valine

C02585

C05142

C07086

C00642

C05593

C06207

C12623

C04044

C12623

C04044

C00406

K18383

Valine

C02585

C05142

C07086

C00642

C05593

C06207

C12623

C04044

C12623

C04044

C00406

K18383

Valine

C02585

C05142

C07086

C00642

C05593

C06207

C12623

C04044

Phenylalanine metabolism
MPI-209

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300
C16719

C02765
C01575

C04351

K10775
K13064

C00188

K01450
C01586

C00512

K00487

C00423

C01772

C00811

DDC

C03519

K00270
K00817
K00830
K005821

K00817
K00411
K00280
K00824

K10797

K01904

C05332

C00166

C05629

C11457

C01198

C00223

C00156

MAOA
K03782
K023371...

C00601

K12732

HPD

K18606

MIF

C12620

C05708

K05708...

C00323

K03782
K023371...

C00601

K00955

C05607

C02763

K05712

C12622

C011588

K05712

C00323

K00588 Benzoate degradation

ALDH3
K00146

C00146

C05853

C05607

C02763

K05711
K05711

C12623

C04044

C00406

C02585
C051426
C00642

C07086

K10437

C05852

C06207

Styrene degradation

K05713
K05713

C12624

C04479

C00406

C05593

K02614

C06207

K01912

C00592

C18361

C152836

C0213735

C00542

Benzoate degradation

C00442

C00442 cycle (TCA cycle)

K18383

C00630

K155
GLYAT

C05593

C04143

K02602

C00162

C05369

K02603

C00268

C09945

C00596

C00755

C00083

C00122

K02554

C03589

C00755

C00755

C00083

K155
GLYAT

C05593

C04143

K02602

C00162

C05369

K02603

C00268

C09945

C00596

C00755

C00083

C00122

K02554

C03589

C00755

C00755

C00083

K155
GLYAT

C05593

C04143

K02602

C00162

C05369

K02603

C00268

C09945

C00596

C00755

C00083

C00122

K02554

C03589

C00755

C00755

C00083

K155
GLYAT

C05593

C04143

K02602

C00162

C05369

K02603

C00268

C09945

C00596

C00755

C00083

C00122

K02554

C03589

C00755

C00755

C00083

K155
GLYAT

C05593

C04143

K02602

C00162

C05369

K02603

C00268

C09945

C00596

C00755

C00083

C00122

K02554

C03589

C00755

C00755

C00083

K155
GLYAT

C05593

C04143

K02602

C00162

C05369

K02603

C00268

C09945

C00596

C00755

C00083

C00122

K02554

C03589

C00755

C00755

C00083

K155
GLYAT

C05593

C04143

K02602

C00162

C05369

K02603

C00268

C09945

C00596

C00755

C00083

C00122

K02554

C03589

C00755

C00755

C00083

K155
GLYAT

C05593

C04143

K02602

C00162

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C00755

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K155
GLYAT

C05593

C04143

K02602

C00162

C05369

K02603

C00268

C09945

C00596

C00755

C00083

C00122

K02554

C03589

C00755

C00755

C00083

K155
GLYAT

C05593

C04143

K02602

C00162

C05369

K02603

C00268

C09945

C00596

C00755

C00083

C00122

K02554

C03589

C00755

C00755

C00083

K155
GLYAT

C05593

C04143

K02602

C00162

C05369

K02603

C00268

C09945

C00596

C00755

C00083

C00122

K02554

C03589

C00755

C00755

C00083

K155
GLYAT

C05593

C04143

K02602

C00162

C05369

K02603

C00268

C09945

C00596

C00755

C00083

C00122

K02554

C03589

C00755

C00755

C00083

K155
GLYAT

C05593

<

Phenylalanine metabolism
MPI-210

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C04351

C01575

C16719

C00512

C00181

C01450

C01586

K10775

K13064

K18860

C05620

K00487

C00423

C01772

C00811

K01904

DDC

C03519

K00270

GOT1

TAK

K00817

L411

K00280

K00824

C05821

C00166

K00830

K00582

K10797

C05629

C11457

C01198

C00223

C00156

C05332

MAOA

K12732

K03782

K02337

K02371

C12620

C05708

K05708

C00323

HPD

K18606

MIF

C02763

K05712

C12622

C11588

C00323

Benzoate degradation

C00601

K00955

C05607

C02763

K05711

K05711

K05711

K05712

K00588

ALDH3

K00146

C05853

C05853

K10437

C12623

C04044

C00406

C02585

C05142

C07086

K10437

C05852

Styrene degradation

K05713

K05713

C00406

C00642

C05593

K02614

C06207

K01912

C05593

C12624

C04479

K05714

K05714

C07303

C00582

C18361

C15283

C02137

C03735

C00542

Benzoate degradation

C00042

Cycle (TCA cycle)

K18383

C00630

K155

GLYAT

C05593

C04143

K02602

C02062

C05369

K02603

K02603

K02603

C00596

C00755

C00083

C05593

C04143

C02280

C00074

K01692

C00024

K02615

C03589

K01666

C00022

C16666

C18202

K02615

C02280

C00074

K01692

C00084

K04073

C06866

C00091

Citrate cycle (TC

C00024

Phenylalanine metabolism
MPI-213

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C01575

C04351

K10775
K13064

C00188

K01450

C01586

C00512

Tropane

K00270

GOT1

K00817

L411

C00423

K00487

C01772

C00811

K01904

DDC

C03519

K00830

C05821

K00280

C00423

K10797

C05629

C11457

C01198

C00223

C00156

C05332

C00166

K12732

MIF

C02763

C12620

C05708

K05708

C11457

C00323

K00588

K03782

MAOA

K02337

K00955

HPD

C05607

C12622

C11588

K05712

K05712

C00323

K00588

C00601

K00955

HPD

C05607

C02763

C12622

C11588

K05712

K05712

C00323

K00588

ALDH3

K00146

C05853

C05607

C02763

C12623

C04044

K05711

K05711

C00406

K00588

C02585

C05142

C07086

K10437

C05852

Styrene degradation

C12623

C04044

K05713

K05713

C00406

K18383

Valine

C00642

C05593

K02614

C06207

C06207

C06207

C12624

C04479

K05714

K05714

C07303

K18383

Valine

C00582

C18361

C15283

C02137

C01835

C00542

Benzoate degradation

C00042

cycle (TCA cycle)

C00596

K18383

C00630

K155

GLYAT

C02602

C00162

C05369

K02603

C02603

C09945

C00122

K02554

C00596

C00755

C00083

C05593

C04143

C02602

C00162

C05369

K02603

C02603

C09945

C00122

K02554

C00596

C00755

C00083

K02615

C02280

C00074

K01692

C00144

C00084

C00022

C16666

C18202

C06866

C00091

C02280

C00074

K01692

C00144

C00084

C00022

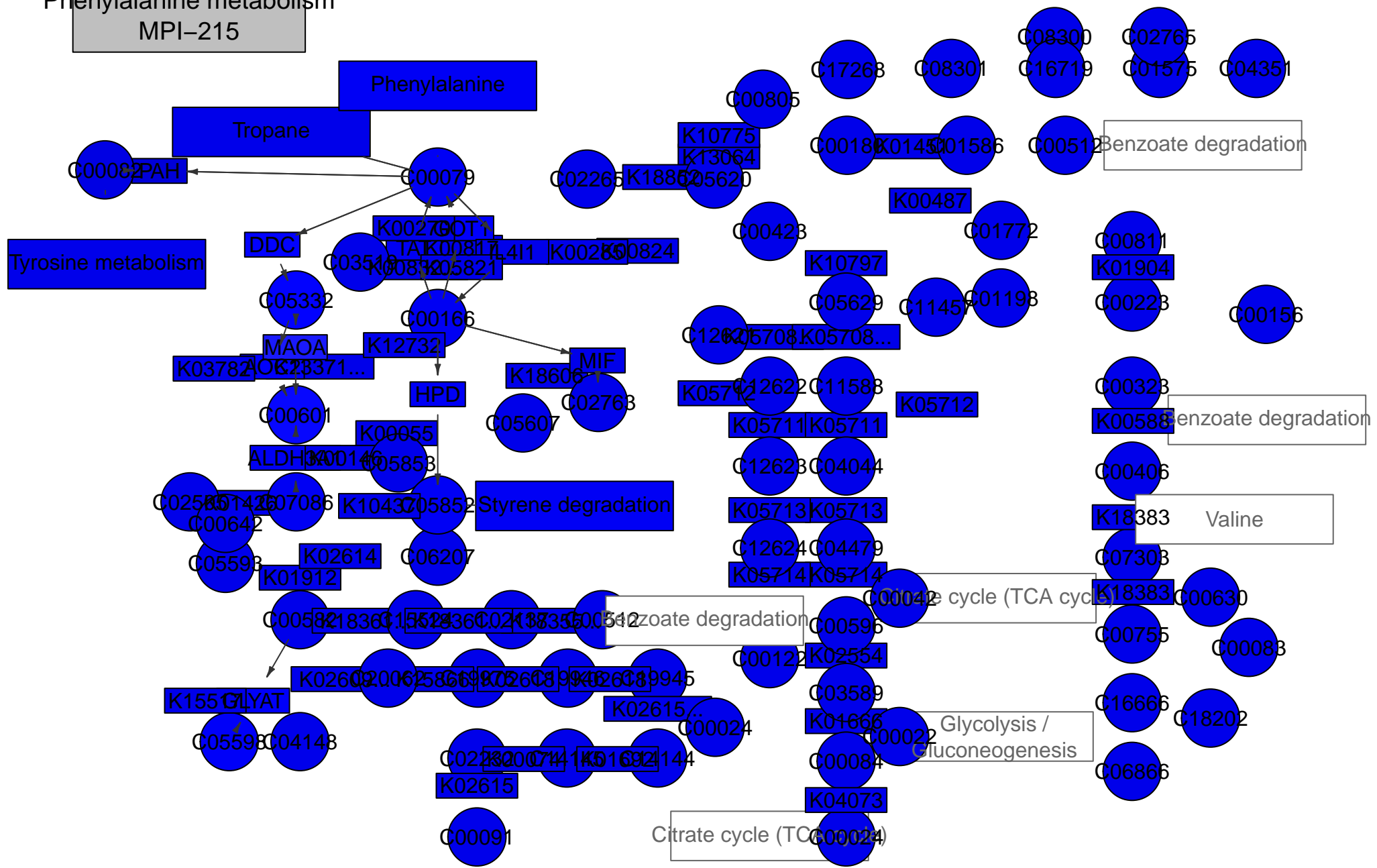
C16666

C18202

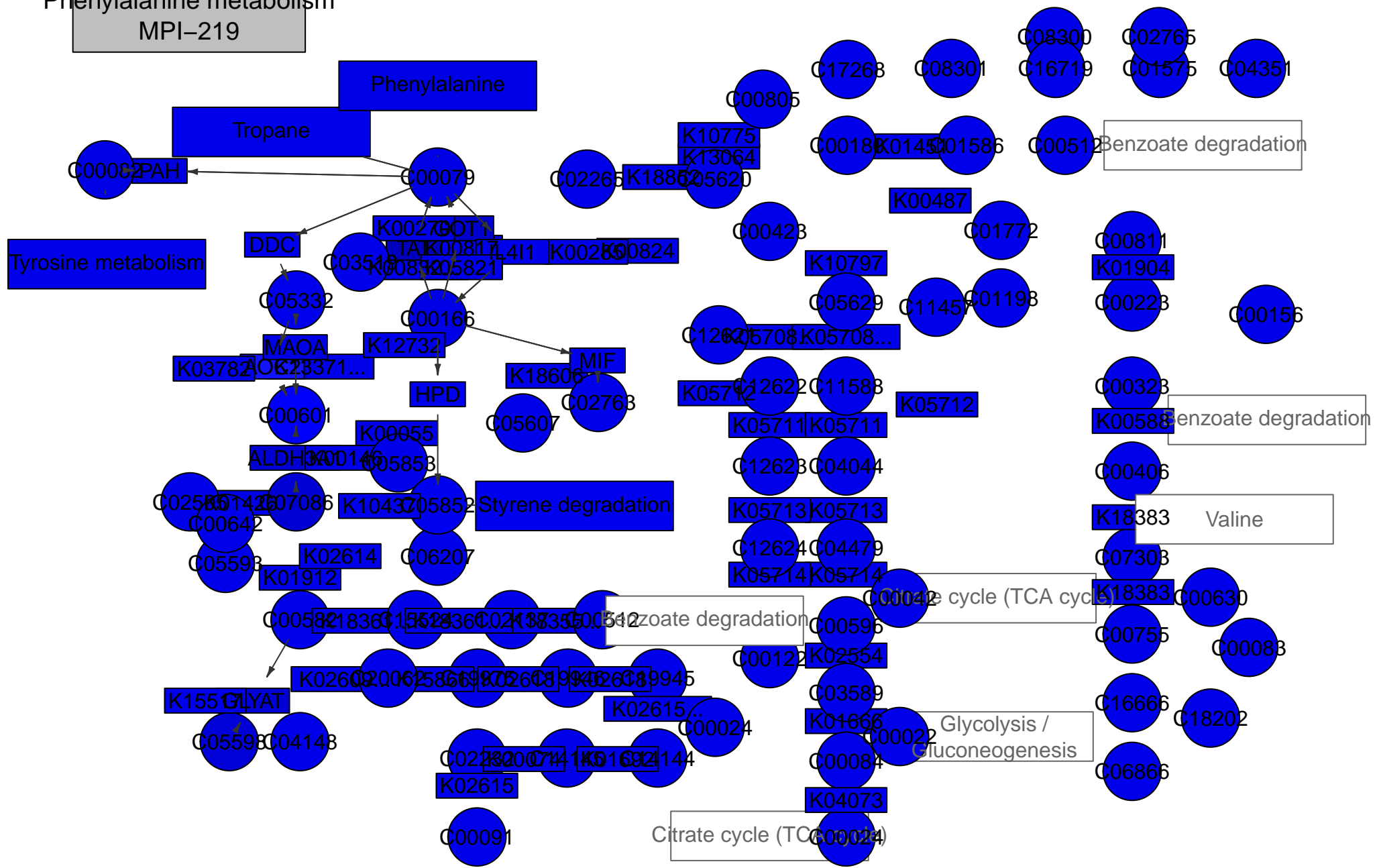
C06866

Citrate cycle (TC

Phenylalanine metabolism
MPI-215



Phenylalanine metabolism
MPI-219



Phenylalanine

Tropane

Tyrosine metabolism

DDC

MAOA

C00601

ALDH3

C02585
C05742
C00642

C05593

K155
GLYAT

C05593
C04148

K00279
GOT1

C03519
C00817
L411

C05332

K12732

HPD

K00955

C00146
C05853

C02585
C05742
C00642

C05593

C00582
C18361
C15283
C02137
C13350
C00542

K02614
C00166
C05607

K02615

C02280
C00744
K01692
C01144

K02615

C00091

K18606

MIF

C05607
C02763

Styrene degradation

K10775
K13064

C02265
K18862
C05620

C00805

C17268

C08301

C08300
C16719

C02765
C01575

C04351

C00181
K01453
C01586

C00512

Benzoate degradation

C00423

K00487

C01772

K10797

C05629

C11457

C01198

C00811
K01904

C00223

C00156

C12620
C05708
K05708...

C12622
C11588

K05712

C00323

K00588
Benzoate degradation

K05711
K05711

C12623
C04044

C00406

K05713
K05713

K18383
Valine

C12624
C04479

K05714
K05714

C07303

C00042
cycle (TCA cycle)

K18383
C00630

C00755

C00088

C00122
K02554

C03589

K01666

C00022
Glycolysis /
Gluconeogenesis

C16666

C18202

C00084

K04073

C06866

Citrate cycle (TCA cycle)

C00024

Phenylalanine metabolism
MPI-221

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C04351

C16719

C01575

K10775
K13064

C00188

K01450

C01586

C00512

K18860

C05620

K00487

C00423

C01772

C00811

DDC

C03519

K00270
K00817
K00830
K00824

C00817
K00280

K10797

C01198

K01904

C05332

C00166

C05629

C11457

C00223

C00156

MAOA

C00601

K12732

K03782
K023371...

MIF

C02763

C12622

C11588

C00323

K03782
K023371...

K00955

K00146

HPD

K18606

C05607

K05712

C12623

C04044

K00588

C02585
C05142
C00642

C07086

K10437

C05852

C05852

Styrene degradation

K05713

K05713

C00406

C05593

K02614

C06207

C06207

C06207

C06207

C12624

C04479

K05714

C07303

K155
GLYAT

C05598

C04143

K02602

C02062

C02062

C02062

C02062

C02062

C02062

C02062

C02062

C02062

C05598

C04143

C02062

C02062

C02062

C02062

C02062

C02062

C02062

C02062

C02062

C02062

C00091

Citrate cycle (TC

K04073

C00024

C03589

K01666

C00084

C00024

C00122

K02554

C00024

C00024

C00024

C00042 cycle (TCA cycle)

K18383

C00630

C00755

C00083

C16666

C18202

C06866

C06866

Phenylalanine metabolism
MPI-223a

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

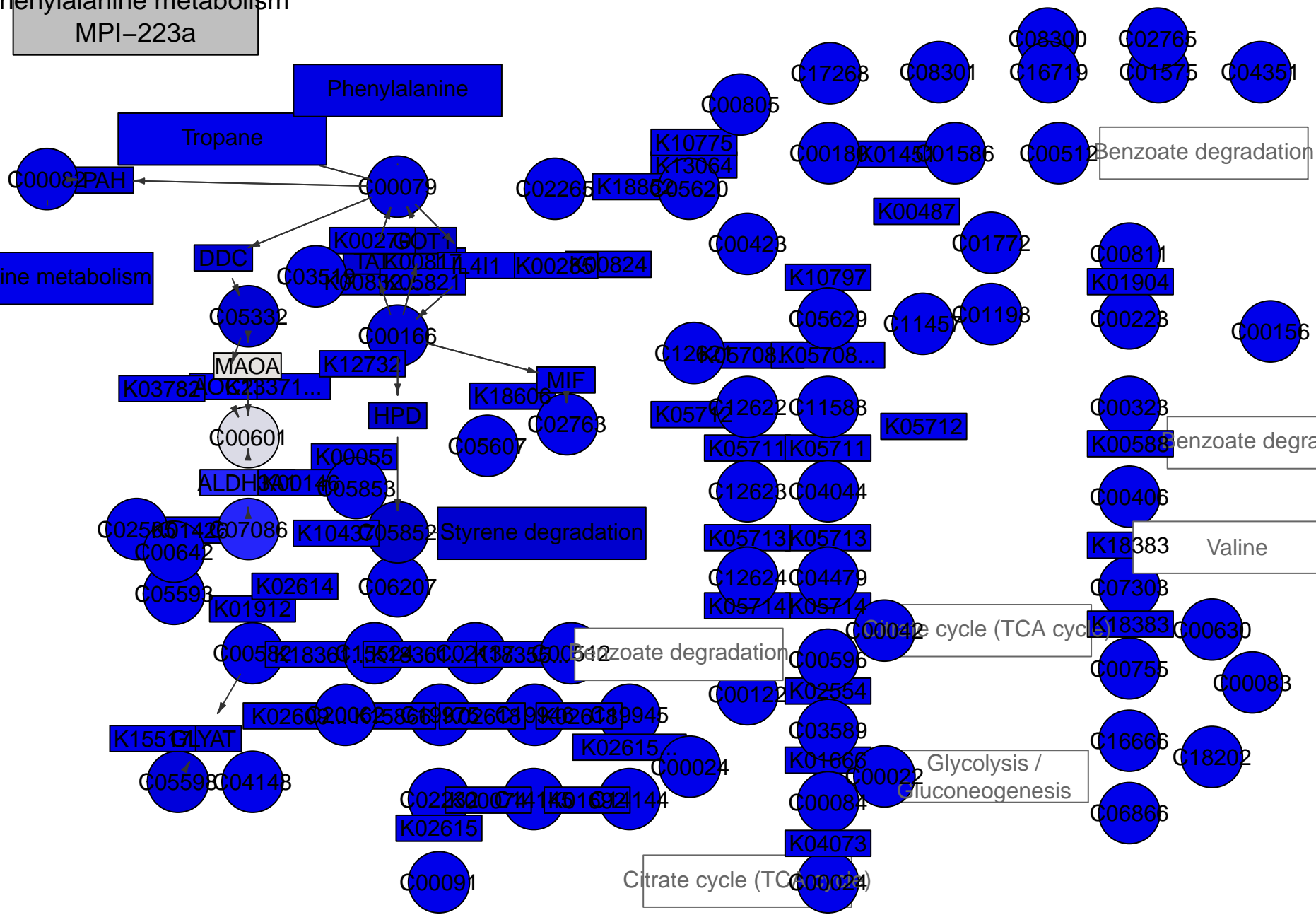
Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC



Phenylalanine metabolism
MPI-224

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

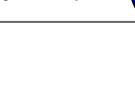
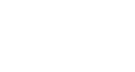
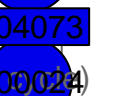
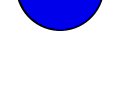
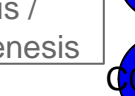
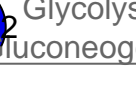
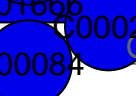
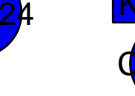
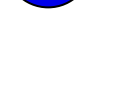
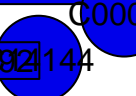
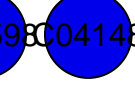
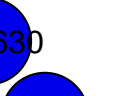
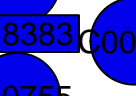
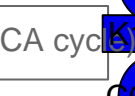
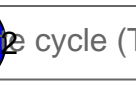
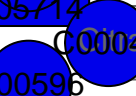
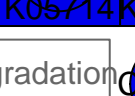
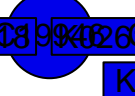
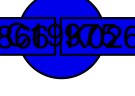
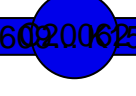
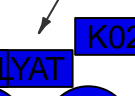
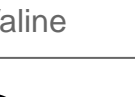
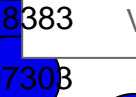
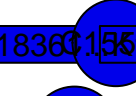
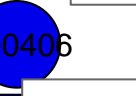
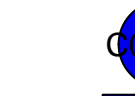
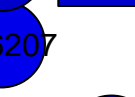
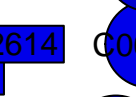
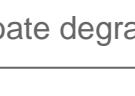
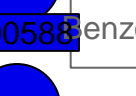
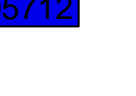
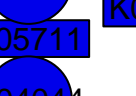
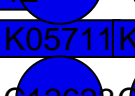
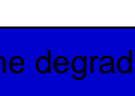
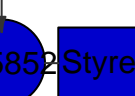
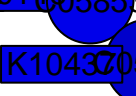
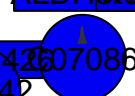
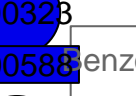
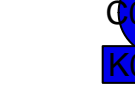
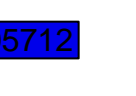
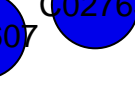
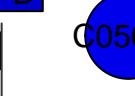
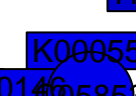
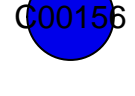
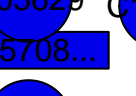
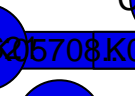
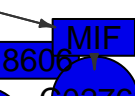
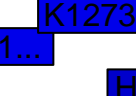
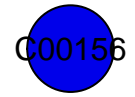
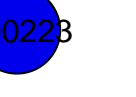
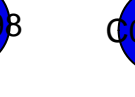
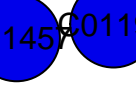
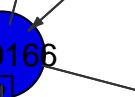
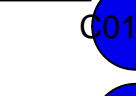
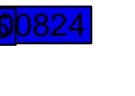
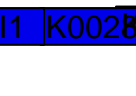
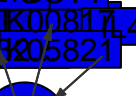
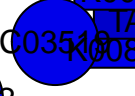
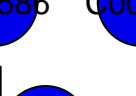
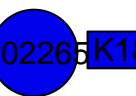
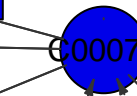
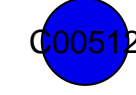
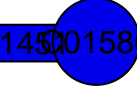
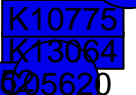
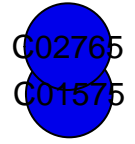
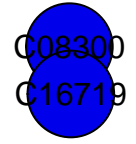
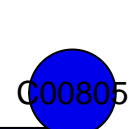
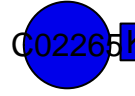
Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC



Phenylalanine metabolism
MPI-229

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

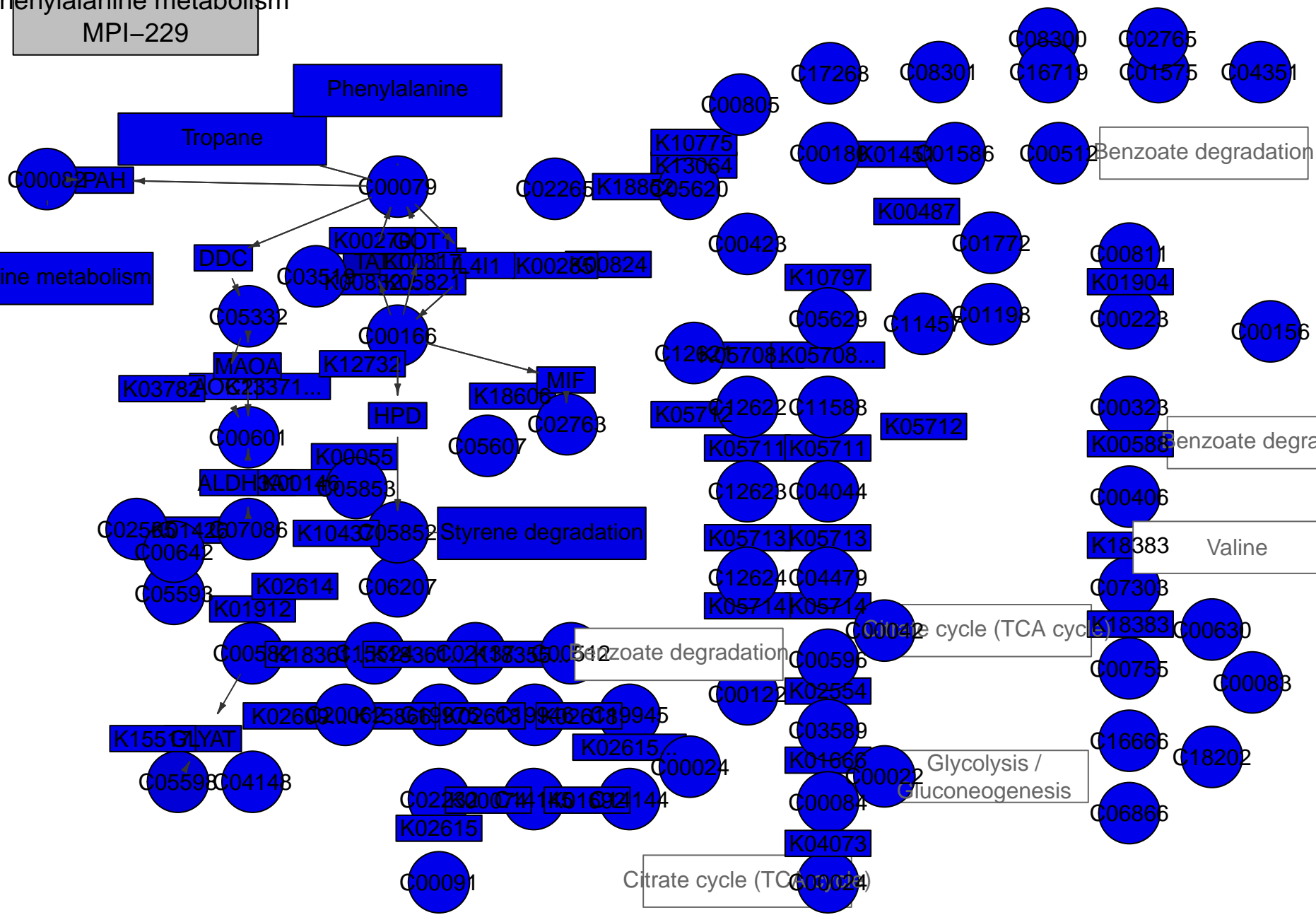
Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC



Phenylalanine metabolism
MPI-230

Phenylalanine

Tropane

PAH

Tyrosine metabolism

DDC

GOT1

TAK

MAOA

K12732

MIF

HPD

K18606

C00601

K00955

ALDH3

K00146

Styrene degradation

C02585

C05142

C07086

C05852

C00642

C05593

C02614

C06207

C00582

C01836

C01523

C02336

C02137

C03735

C00542

K155 GLYAT

C02602

C00062

C05366

C02603

C03995

C05598

C04143

K02615

C02230

C00074

C05169

C02144

Citrate cycle (TC

C00091

C00024

C00024

C00805

C17268

C08301

C16719

C02765

C01575

C04351

K10775

K13064

C00188

K01450

C001586

C00512

C02265

K18860

C05620

K00487

C00423

C01772

C00811

K01904

K10797

C05629

C11457

C01198

C00223

C00156

C12620

C05708

K05708

C00323

K00588

K05712

C12622

C011588

C00406

K00588

K05711

K05711

K05712

C12623

C04044

C00406

K18383

Valine

K05713

K05713

C12624

C04479

C07303

K18383

C00630

K05714

K05714

Citrate cycle (TCA cycle)

C00596

C00755

C00083

C00122

K02554

C03589

K01666

C00022

C16666

C18202

Glycolysis / Gluconeogenesis

C00084

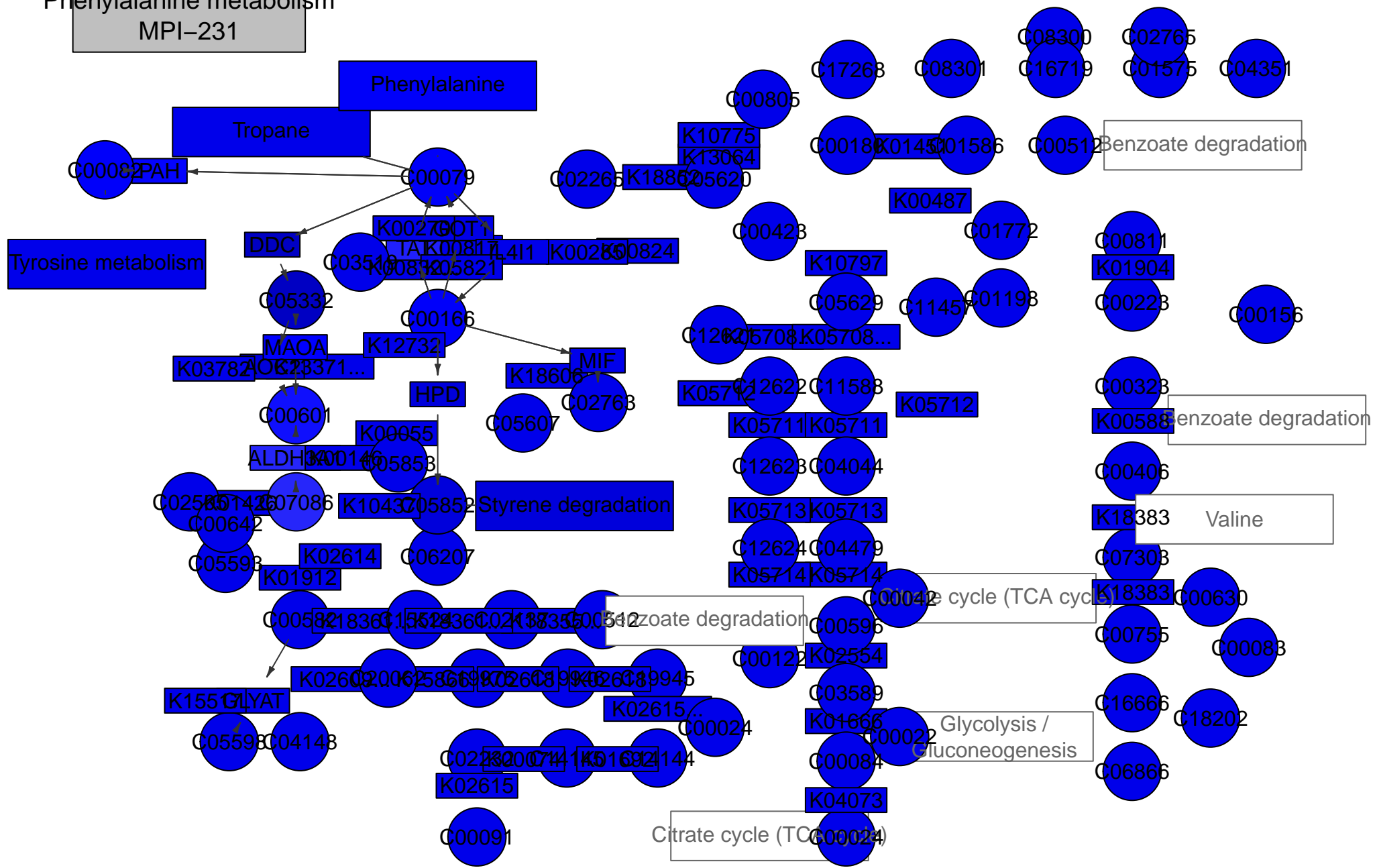
C06866

C00024

K04073

C00024

Phenylalanine metabolism
MPI-231



Phenylalanine metabolism
MPI-234

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

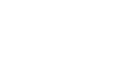
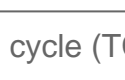
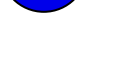
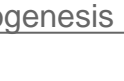
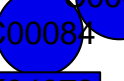
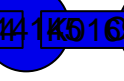
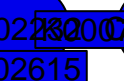
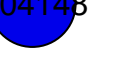
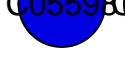
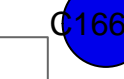
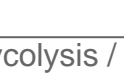
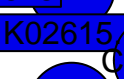
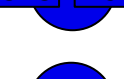
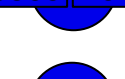
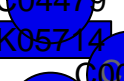
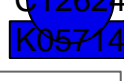
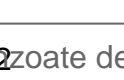
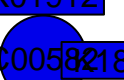
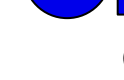
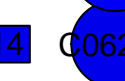
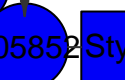
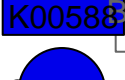
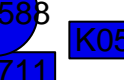
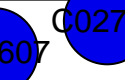
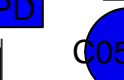
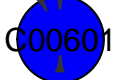
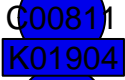
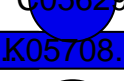
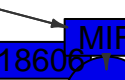
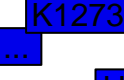
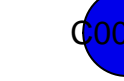
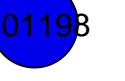
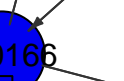
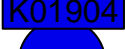
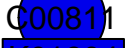
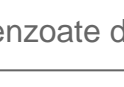
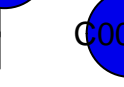
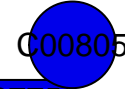
Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC



Phenylalanine metabolism
MPI-235

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300
C16719

C02765
C01575

C04351

K10775
K13064

C00188
K01450

C01586

C00512

K18860
C05620

K00487

C00423

C01772

C00811

DDC

C03519

K00270
GOT1
K00817
L411
K00280
K00824

K10797

K01904

C05332

C00166

C05629

C11457

C01198

C00223

C00156

MAOA
K03782
K023371...

C00601

K12732

HPD

MIF
K18606

C12620

C05708
K05708...

C11588

C00323

K00955

C00146

K00146

C05853

C05607

C02763

K05712

C12622

C11588

K00588

ALDH3
K00146

C05853

C05852

C05852

C05607

K05712

K05711
K05711

C12623

C04044

C00406

C02585
C05142
C00642

C07086

K10437

C05852

C06207

K05713
K05713

C12624

C04479

K18383

Valine

C05593

K02614

C06207

C06207

C06207

K05714
K05714

C12624

C04479

C07303

C00630

C00582

C18361

C15283

C02137

C03735

C00542

C00596

C00042

Cycle (TCA cycle)

K18383

C00630

K155
GLYAT

C05593

C04143

C02602

C00625

C03669

C02603

C03995

C02603

C00024

C03589

C16666

C05593

C04143

C02602

C00625

C03669

C02603

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C00024

C01666

C18202

C02602

C00074

K01692

C00024

C00084

K04073

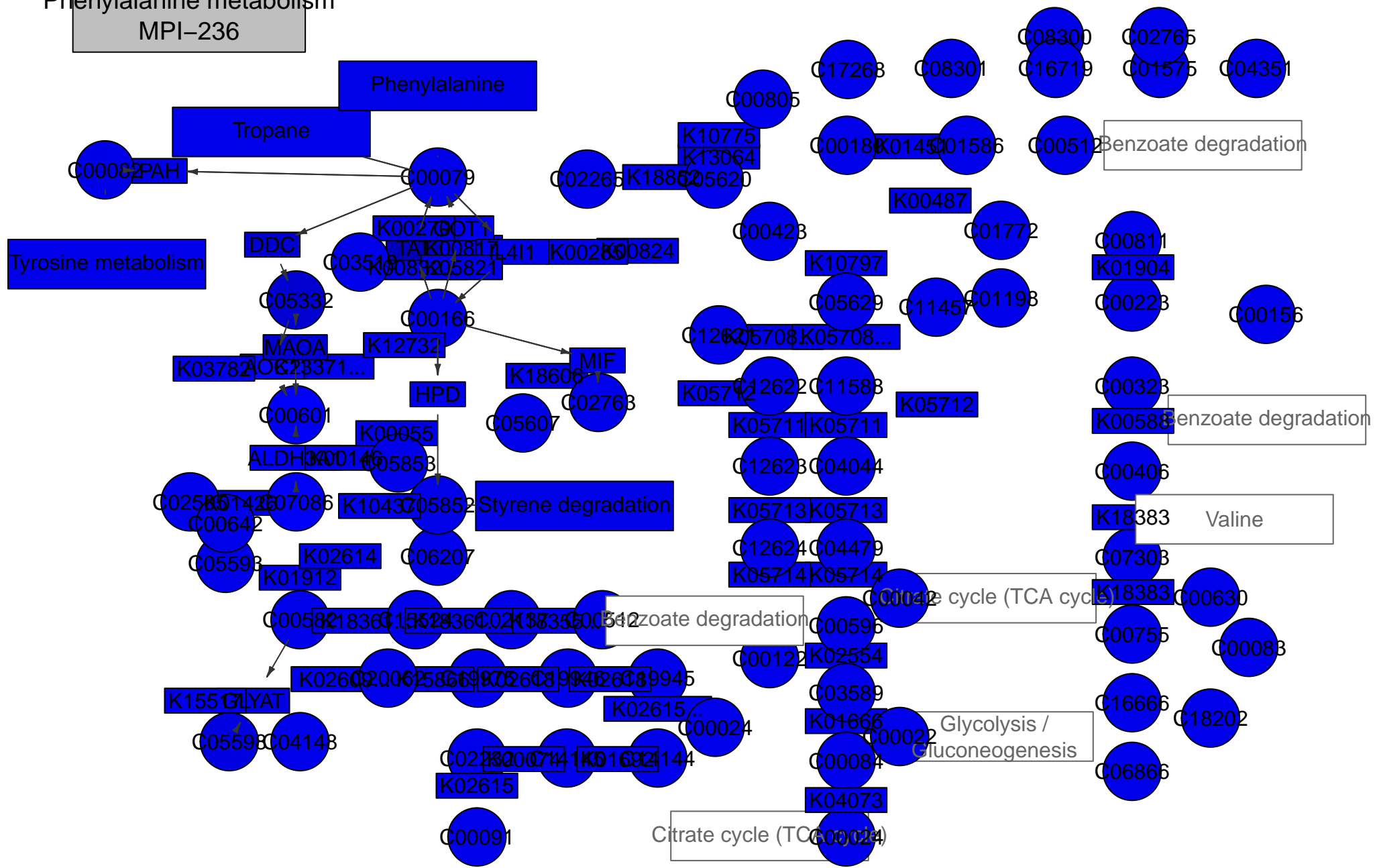
C00024

C06866

C00091

Citrate cycle (TC

Phenylalanine metabolism
MPI-236



Phenylalanine metabolism
MPI-237

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

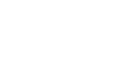
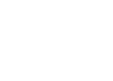
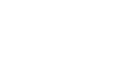
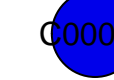
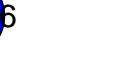
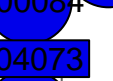
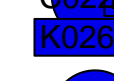
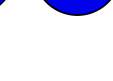
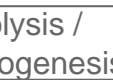
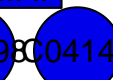
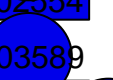
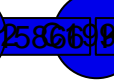
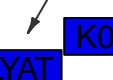
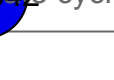
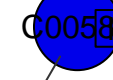
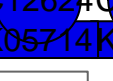
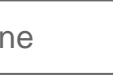
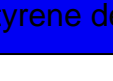
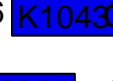
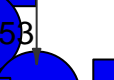
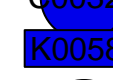
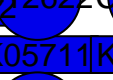
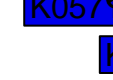
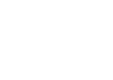
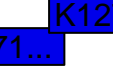
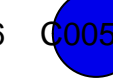
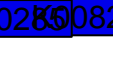
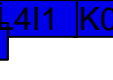
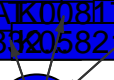
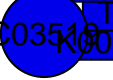
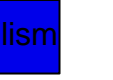
Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC



Phenylalanine metabolism
MPI-239

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

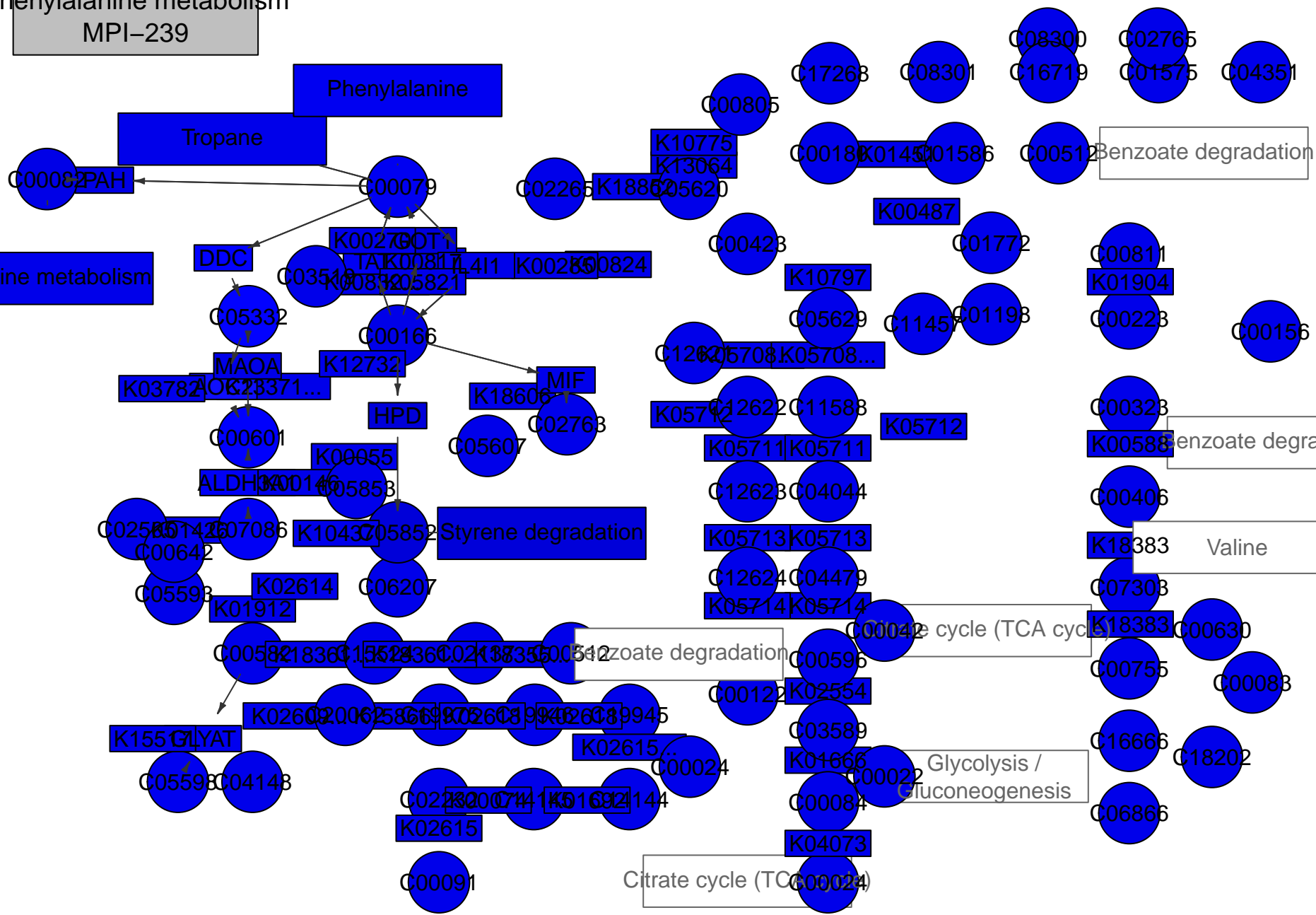
Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC



Phenylalanine metabolism
MPI-241

Phenylalanine

Tropane

PAH

Tyrosine metabolism

DDC

GOT1

TAK

MAOA

K12732

MIF

HPD

K18606

C00601

K00955

C05607

ALDH3

K00146

Styrene degradation

C02585

C05142

C07086

C00642

C05593

K02614

C06207

C00582

C18361

C15283

C02137

C03735

C00542

K155 GLYAT

K02602

C02062

C02536

K02608

C03995

C05598

C04148

C02280

C00074

K01692

C00024

K02615

C02280

C00074

K01692

C00024

C00091

Citrate cycle (TC

C00805

C17268

C08301

C16719

C08300

C02765

C01575

C04351

K10775

K13064

C00188

K01450

C001586

C00512

Benzoate degradation

C02265

K18860

C05620

K00487

C00423

C01772

C00811

K01904

C05332

C03519

C00850

C05821

K10797

C11457

C01198

C00223

C00156

C12620

C05629

C11457

C01198

C12620

C05708

K05708

C00323

K00588

Benzoate degradation

K05712

C12622

C11588

K05712

C00406

K00588

C00601

K00955

C05607

C02763

K05712

K05711

K05711

K05712

C00406

C02585

C05142

C07086

C00642

K10437

C05852

C12623

C04044

K05713

K05713

K18383

Valine

C05593

K02614

C06207

K01912

C00582

C18361

C15283

C02137

C03735

C00542

C00442

Cycle (TCA cycle)

K18383

C00630

C00582

C18361

C15283

C02137

C03735

C00542

C00596

C00122

K02554

C00596

C00755

C00083

K155 GLYAT

K02602

C02062

C02536

K02608

C03995

C00024

C03589

K01666

C00022

Glycolysis / Gluconeogenesis

C16666

C18202

C05598

C04148

C02280

C00074

K01692

C00024

C00084

C00022

Glycolysis / Gluconeogenesis

C16666

C18202

K02615

C02280

C00074

K01692

C00024

K04073

C00024

C06866

C00091

Citrate cycle (TC

Phenylalanine metabolism
MPI-243

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300
C16719

C02765
C01575

C04351

K10775
K13064

C00188

K01450

C01586

C00512

K18860

C05620

K00487

C00423

C01772

C00811

DDC

C03519

K00270
K00817
K00830
K005821

K00817
K007411
K00280
K00824

K10797

K01904

C05332

C00166

C05629

C11457

C01198

C00223

C00156

MAOA

C00601

K12732

K03782
K023371...

MIF

C02763

C12620

C05708

K05708...

C00323

K03782
K023371...

K00955

K00146

HPD

C05607

K18606

C02622

C011588

K05712

K00588

ALDH3

C00146

C05853

C05607

C02763

K05712

K05711

K05711

K05712

C00406

C02585
C051426

C07086

K10437

C05852

Styrene degradation

C06207

C12623

C04044

K05713

K05713

C00406

C00642

C05593

K02614

C06207

C06207

K05713

C12624

C04479

K05714

K05714

C07303

C00582

C18361

C15283

C02137

C03735

C00542

Benzoate degradation

C00596

C00042

Cycle (TCA cycle)

K18383

C00630

K155
GLYAT

C05593

C04143

K02602

C00162

C05369

K02603

C00024

C03589

K01666

C00022

C16666

C05593

C04143

C02280

C00074

K01692

C00024

C00084

K04073

C06866

C18202

C00091

Citrate cycle (TC

C00024

Phenylalanine metabolism
MPI-246

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C01575

C04351

K10775

C00188

K01450

C001586

C00512

K18860

C05620

K00487

C00423

C01772

C00811

DDC

C03519

K00270

K00817

K00280

K10797

K01904

C05332

C00166

C05629

C11457

C00223

C00156

MAOA

K12732

MIF

C12620

C05708

C11457

C01198

K03782

C00601

HPD

K18606

C05607

C02763

K05712

C12622

C11588

C00323

K02337

C00146

K00955

C05853

C05607

C02763

K05711

K05711

K05712

K00588

C02585

C05142

C07086

K10437

C05852

Styrene degradation

C12623

C04044

C00406

C00642

C05593

K02614

C06207

C05852

Styrene degradation

K05713

K05713

K18383

C05593

K01912

C00582

C18361

C15283

C02137

C03735

C00542

C00042

Cycle (TCA cycle)

K18383

C00630

K155

C05593

C04143

K02602

C02062

C05369

K02603

C03995

C00042

C00596

C00755

C00083

C05593

C04143

K02602

C02062

C05369

K02603

C03995

C00024

C03589

K01666

C00022

C16666

C18202

C05593

C04143

K02602

C02062

C05369

K02603

C03995

C00024

C00084

K04073

C06866

C00024

C05593

C04143

K02602

C02062

C05369

K02603

C03995

C00024

C00084

K04073

C06866

C00024

C00024

Phenylalanine metabolism
MPI-251

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Citrate cycle (TCA cycle)

Glycolysis /
Gluconeogenesis

Citrate cycle (TCA cycle)

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300
C16719

C02765
C01575

C04351

K10775
K13064

C00188

K01450

C01586

C00512

K00487

C00423

C01772

C00811

DDC

C03519

K00270
K00817
K00830
K05821

K00817
K00830
K05821

K00280
K00824

K10797

C01145
C01198

C00223

C00156

C05332

C00166

MIF

C12620

C05629

C11457

C01198

C00323

MAOA

K03782
K023371...

K12732

HPD

K18606

C05607

C02763

K05712

C12622

C11588

K05711

K05711

K05712

K00588

C00601

K00955

C05607

C02763

K05712

C12622

C11588

K05711

K05711

K05712

C02585
C05142
C00642

C07086

C05853

C05852

C06207

Styrene degradation

C12623

C04044

C00406

ALDH3

K10437

C05852

C06207

Styrene degradation

K05713

K05713

K18383

Valine

C05593

K02614

C06207

K01912

C00582

C18361

C15283

C02137

C03735

C00542

Benzoate degradation

C00042

Citrate cycle (TCA cycle)

K155
GLYAT

C05593

C04143

K02602

C00162

C05369

K02603

C03995

K02603

C03995

C00596

C00755

C00083

C05593

C04143

C02280

C00074

K01692

C00024

C00084

C00022

Glycolysis /
Gluconeogenesis

C16666

C18202

K02615

C02280

C00074

K01692

C00024

C00084

C00022

C06866

C00091

Citrate cycle (TCA cycle)

C00024

C00024

Phenylalanine metabolism
MPI-255

Phenylalanine

Tropane

Tyrosine metabolism

Benzoate degradation

Benzoate degradation

Valine

Benzoate degradation

Glycolysis /
Gluconeogenesis

Citrate cycle (TC

C00082 PAH

C00079

C02265

C00805

C17268

C08301

C08300

C02765

C01575

C04351

K10775

C00188

K01450

C001586

C00512

K18860

C05620

K00487

C00423

C01772

C00811

DDC

K00270

GOT1

K00817

L411

K00280

K00824

C03519

K00830

C05821

K10797

C01145

C00223

C00156

C05332

C00166

MIF

C12620

C05629

C11457

C01198

MAOA

K03782

K02337

K12732

K18606

C05607

C02763

K05708

K05708

C00323

K03782

K02337

K12732

K18606

C05607

C02763

K05708

K05708

K05712

C00323

C00601

K00955

HPD

C05607

C02763

K05712

C12622

C11588

C00323

ALDH3

K00146

C05853

C05607

C02763

K05712

K05711

K05711

K00588

C02585

C05142

C07086

K10437

C05852

Styrene degradation

C12623

C04044

C00406

C02585

C05142

C07086

K10437

C05852

Styrene degradation

C12623

C04044

C00406

C00642

C05593

K02614

C06207

C05607

C02763

K05713

K05713

K18383

Valine

C00642

C05593

K02614

C06207

C05607

C02763

K05713

K05713

K18383

Valine

C00582

C18361

C15283

C02137

C03350

C00542

Benzoate degradation

C00596

C00042

Cycle (TCA cycle)

C00630

K155

C05593

C04143

K02602

C00162

C05369

K02603

C00122

K02554

C00596

C00755

C00083

K155

C05593

C04143

K02602

C00162

C05369

K02603

C00122

K02554

C00596

C00755

C00083

C05593

C04143

K02602

C00162

C05369

K02603

C00122

K02554

C00596

C00755

C00083

K02615

C02280

C00074

K05169

C00144

C00024

K01666

C00022

C16666

C18202

K02615

C02280

C00074

K05169

C00144

C00024

K01666

C00022

C16666

C18202

C00091

K02615

C02280

C00074

K05169

C00144

C00024

K04073

C06866

C00024

C00091

K02615

C02280

C00074

K05169

C00144

C00024

K04073

C06866

C00024

Phenylalanine metabolism
MPI-223b

