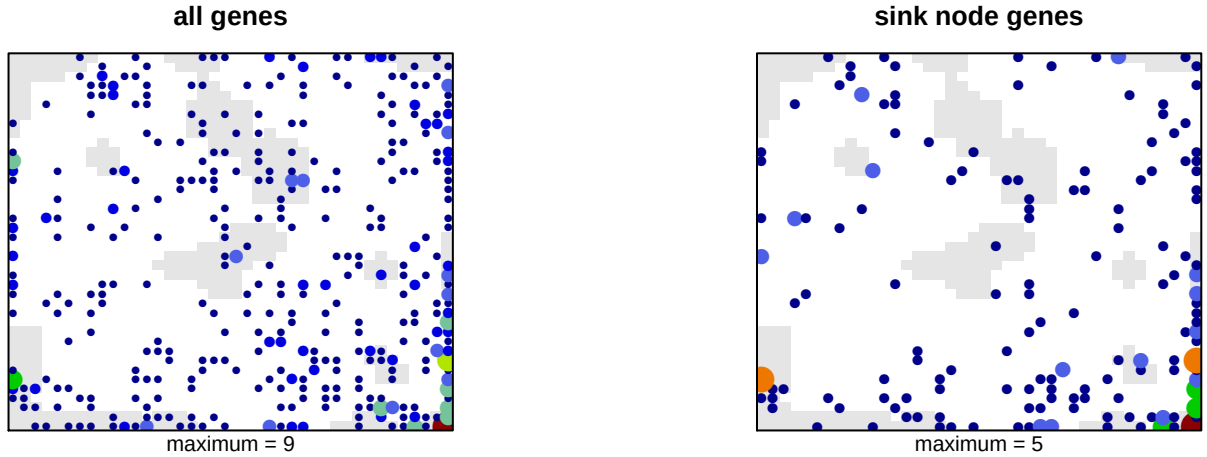
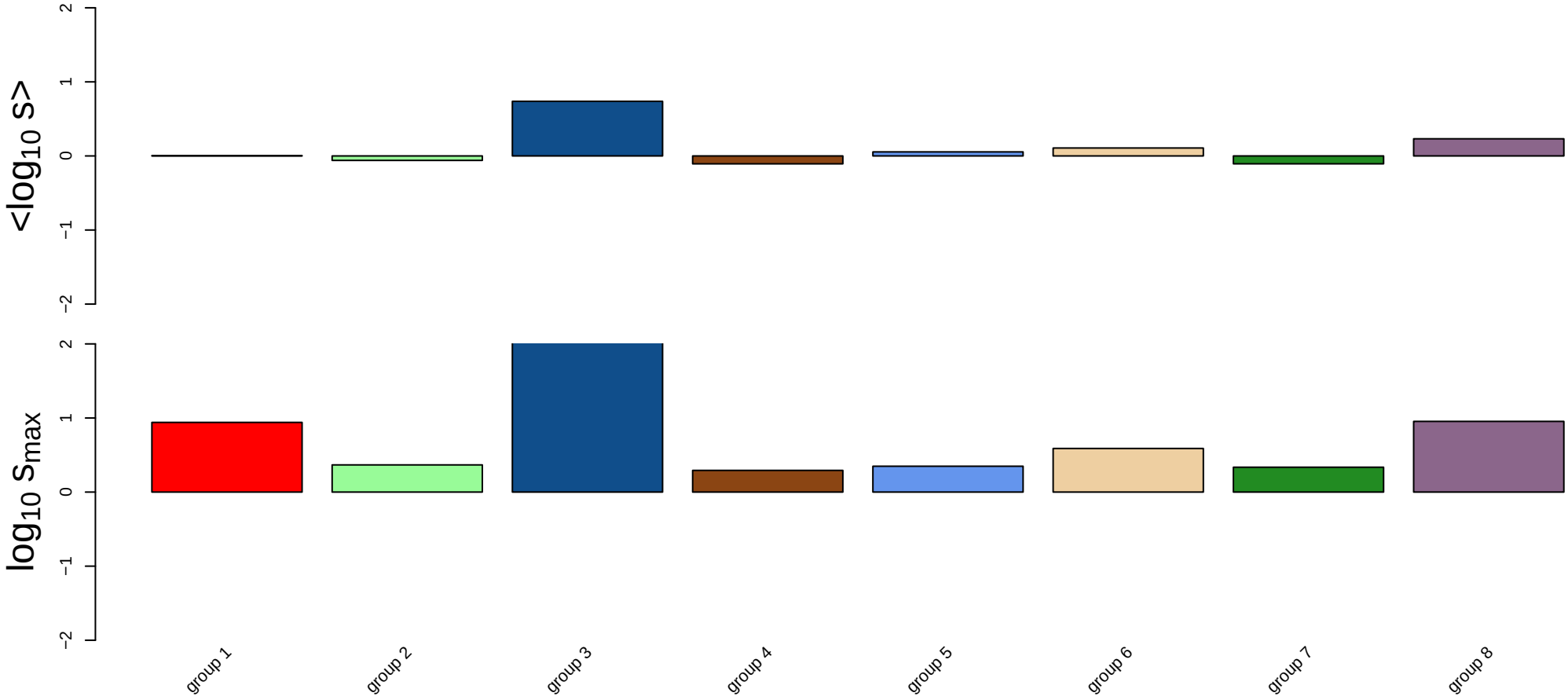
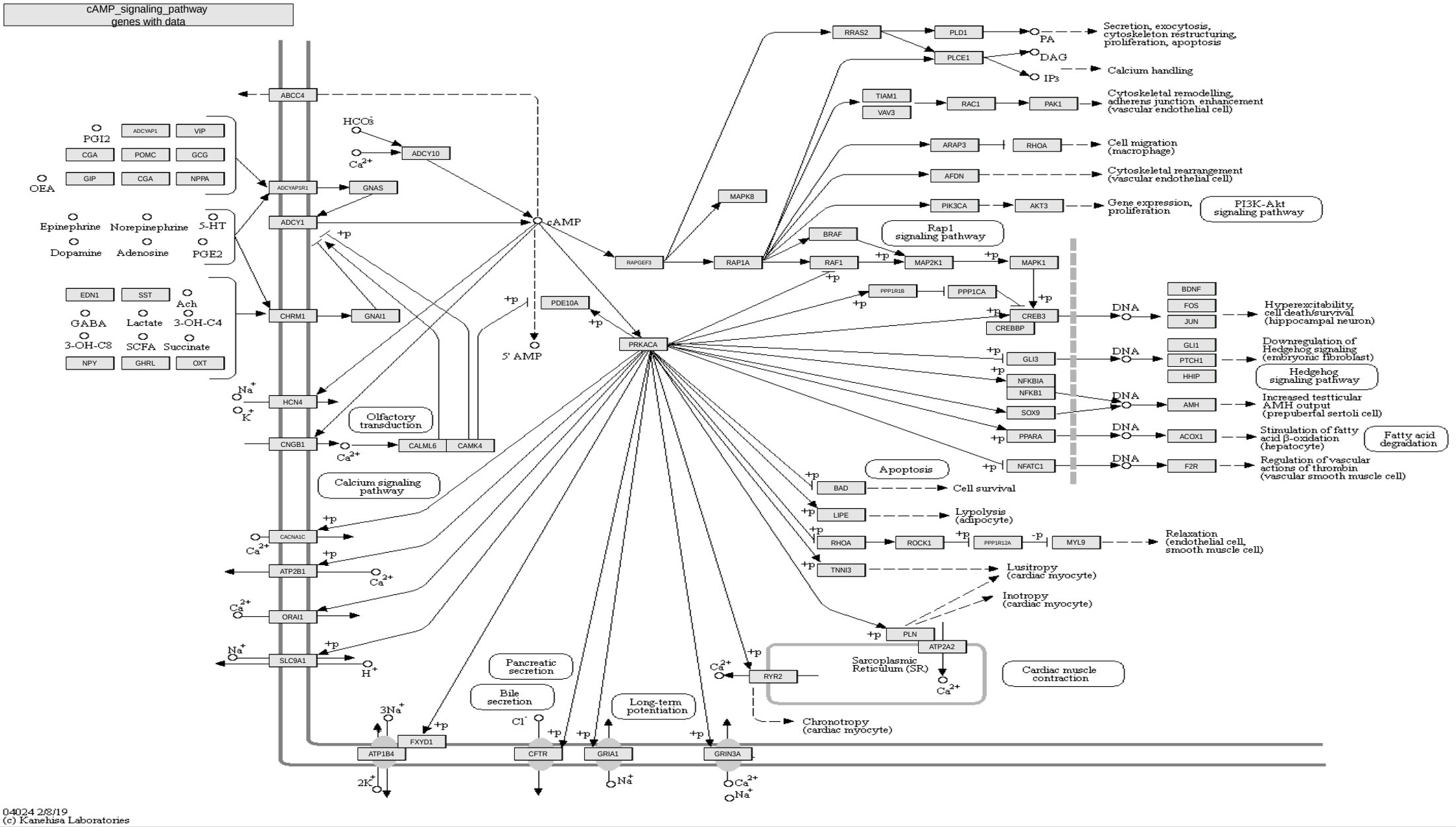
cAMP signaling pathway






cAMP_signaling_pathway
genes with data
ABCC4
PGI2
ADCYAP1
VIP
CGA
POMC
GCG
GIP
CGA
NPPA
OEA
Epinephrine
Norepinephrine
5-HT
Dopamine
Adenosine
PGE2
EDN1
SST
Ach
GABA
Lactate
3-OH-C4
3-OH-C8
SCFA
Succinate
NPY
GHRL
OXT
HCO3
Ca2+
ADCY10
ADCYAP1R1
GNAS
ADCY1
CHRM1
GNAI1
cAMP
+p
5' AMP
PDE10A
Na+
K+
HCN4
Olfactory transduction
CNGB1
Ca2+
CALML6
CAMK4
Calcium signaling pathway
CACNA1C
ATP2B1
ORAI1
SLC9A1
H+
RRAS2
PLD1
PA
PLCE1
DAG
IP3
Secretion, exocytosis, cytoskeleton restructuring, proliferation, apoptosis
Calcium handling
TIAM1
VAV3
RAC1
PAK1
Cytoskeletal remodelling, adherens junction enhancement (vascular endothelial cell)
ARAP3
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Cell migration (macrophage)
AFDN
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PIK3CA
AKT3
Gene expression, proliferation
PI3K-Akt signaling pathway
MAPK8
BRAF
Rap1 signaling pathway
RAPGEF3
RAP1A
RAF1
MAP2K1
MAPK1
PPP1R1B
PPP1CA
CREB3
CREBBP
BDNF
FOS
JUN
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PRKACA
GLI3
GLI1
PTCH1
HHIP
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NFKBIA
NFKB1
SOX9
AMH
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Apoptosis
BAD
Cell survival
LIPE
Lypolysis (adipocyte)
ROCK1
PPP1R12A
MYL9
Relaxation (endothelial cell, smooth muscle cell)
TNNI3
Lusitropy (cardiac myocyte)
Inotropy (cardiac myocyte)
PLN
ATP2A2
Sarcoplasmic Reticulum (SR)
RYR2
Cardiac muscle contraction
Chronotropy (cardiac myocyte)
Pancreatic secretion
Bile secretion
Long-term potentiation
3Na+
FXYD1
ATP1B4
2K+
Cl-
CFTR
GRIA1
GRIN3A
Na+
Ca2+
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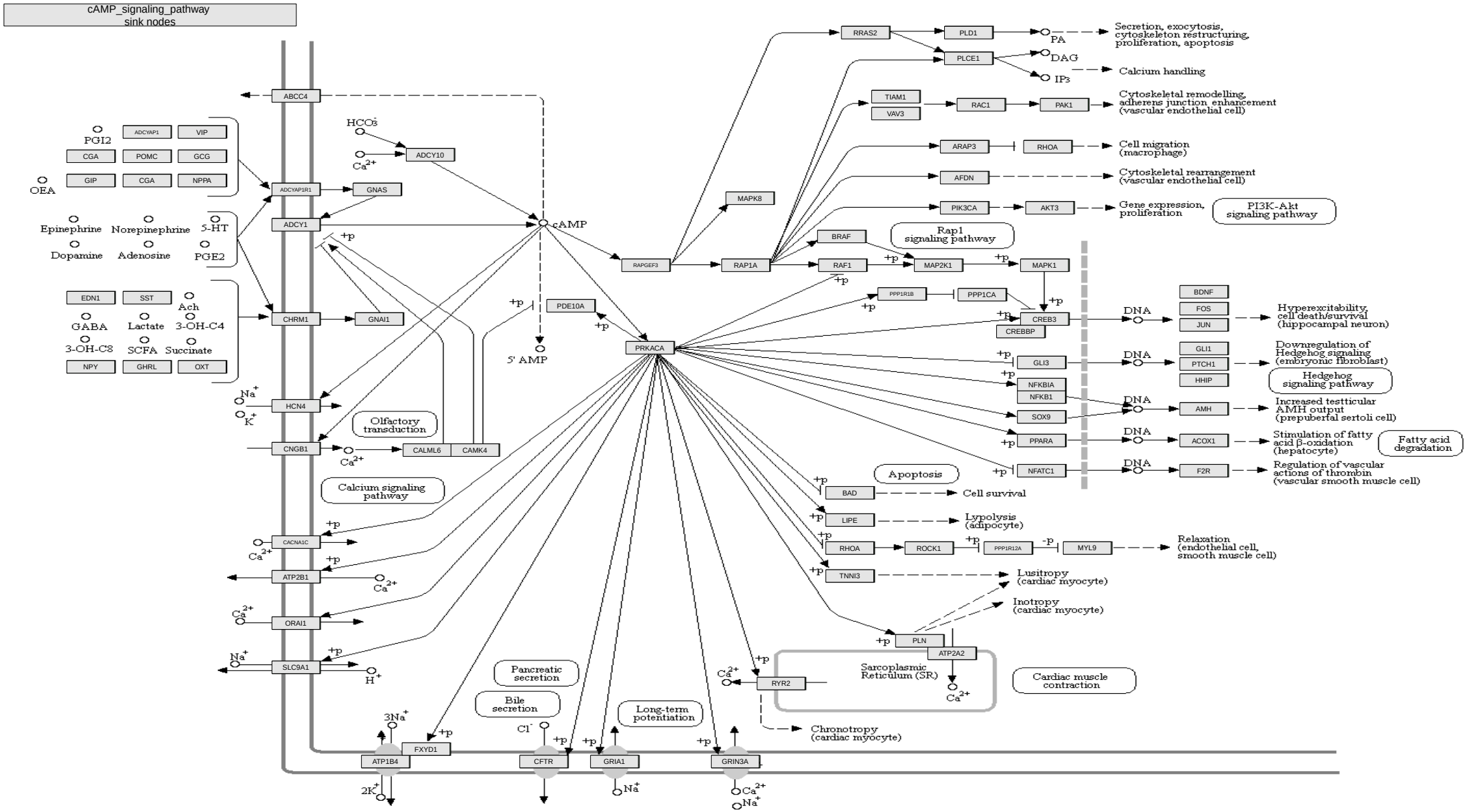
cAMP_signaling_pathway
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ABCC4
PGI2
ADCYAP1
VIP
CGA
POMC
GCG
GIP
CGA
NPPA
OEA
Epinephrine
Norepinephrine
5-HT
Dopamine
Adenosine
PGE2
EDN1
SST
Ach
GABA
Lactate
3-OH-C4
3-OH-C8
SCFA
Succinate
NPY
GHRL
OXT
HCO3
Ca2+
ADCY10
ADCYAP1R1
GNAS
ADCY1
cAMP
CHRM1
GNAI1
5' AMP
PDE10A
HCN4
Na+
K+
Olfactory transduction
CNGB1
Ca2+
CALML6
CAMK4
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ATP2B1
ORAI1
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3Na+
FXYD1
ATP1B4
2K+
Cl-
CFTR
GRIA1
GRIN3A
Na+
Ca2+
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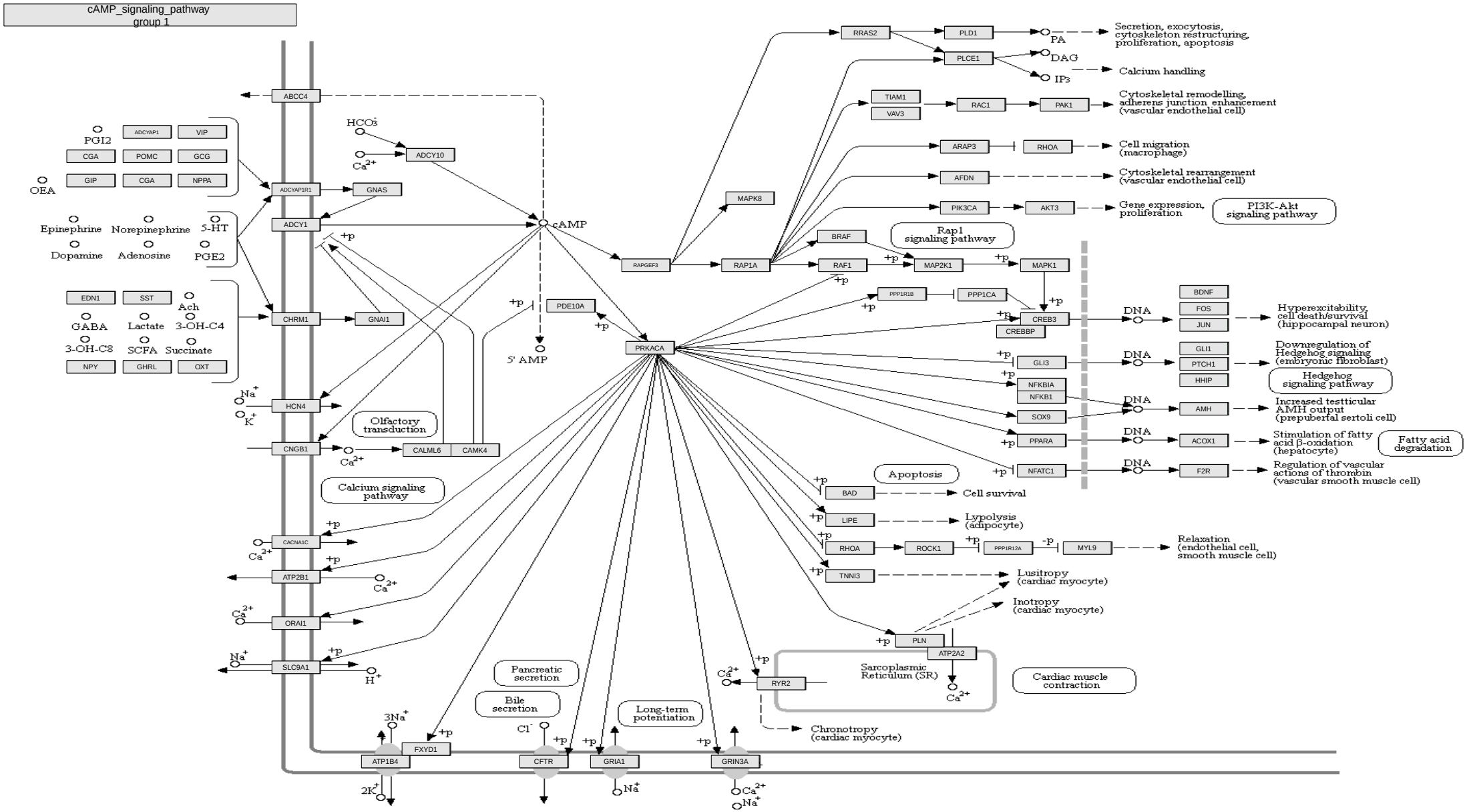
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ABCC4
PGI2
ADCYAP1
VIP
CGA
POMC
GCG
GIP
CGA
NPPA
OEA
Epinephrine
Norepinephrine
5-HT
Dopamine
Adenosine
PGE2
EDN1
SST
Ach
GABA
Lactate
3-OH-C4
3-OH-C8
SCFA
Succinate
NPY
GHRL
OXT
HCO3
Ca2+
ADCY10
ADCYAP1R1
GNAS
ADCY1
CHRM1
GNAI1
cAMP
5' AMP
PDE10A
HCN4
Na+
K+
Olfactory transduction
CNGB1
CALML6
CAMK4
Ca2+
Calcium signaling pathway
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ATP2B1
ORAI1
SLC9A1
H+
RRAS2
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RAP1A
RAF1
MAP2K1
MAPK1
PPP1R1B
PPP1CA
CREB3
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PLN
ATP2A2
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Chronotropy (cardiac myocyte)
Pancreatic secretion
Bile secretion
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3Na+
FXYD1
ATP1B4
2K+
Cl-
CFTR
GRIA1
GRIN3A
Na+
Ca2+
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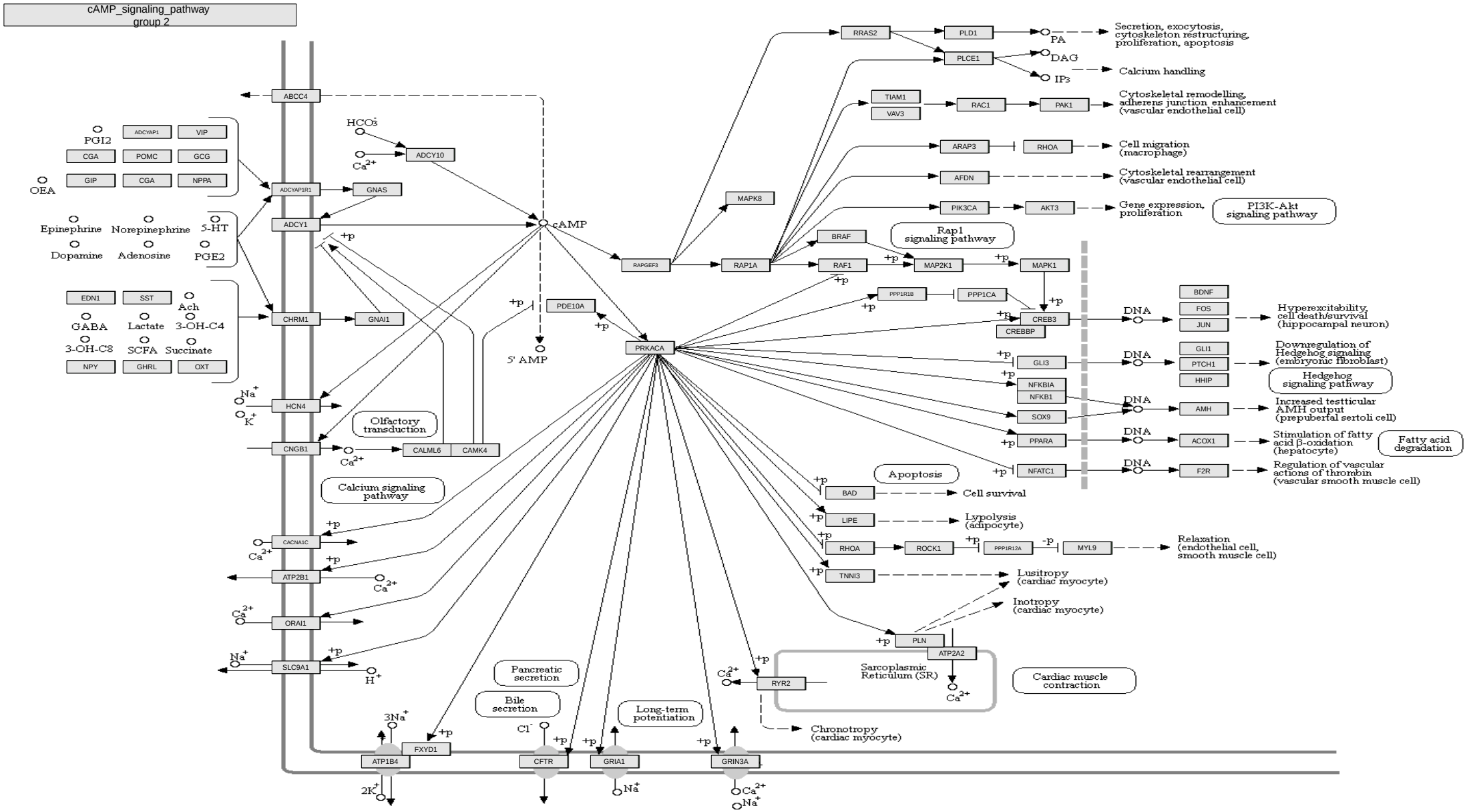
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ABCC4
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CGA
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GCG
GIP
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OEA
Epinephrine
Norepinephrine
5-HT
Dopamine
Adenosine
PGE2
EDN1
SST
Ach
GABA
Lactate
3-OH-C4
3-OH-C8
SCFA
Succinate
NPY
GHRL
OXT
HCO3
Ca2+
ADCY10
ADCYAP1R1
GNAS
ADCY1
CHRM1
GNAI1
cAMP
5' AMP
PDE10A
+p
Na+
K+
HCN4
Olfactory transduction
CNGB1
CALML6
CAMK4
Ca2+
Calcium signaling pathway
CACNA1C
ATP2B1
ORAI1
SLC9A1
H+
Pancreatic secretion
Bile secretion
3Na+
Cl-
FXYD1
ATP1B4
2K+
CFTR
GRIA1
Na+
Long-term potentiation
GRIN3A
Ca2+
Na+
RYR2
Sarcoplasmic Reticulum (SR)
Chronotropy (cardiac myocyte)
Cardiac muscle contraction
RRAS2
PLD1
PA
PLCE1
DAG
IP3
Secretion, exocytosis, cytoskeleton restructuring, proliferation, apoptosis
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TIAM1
VAV3
RAC1
PAK1
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BRAF
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RAPGEF3
RAP1A
RAF1
MAP2K1
MAPK1
PPP1R1B
PPP1CA
CREB3
CREBBP
DNA
BDNF
FOS
JUN
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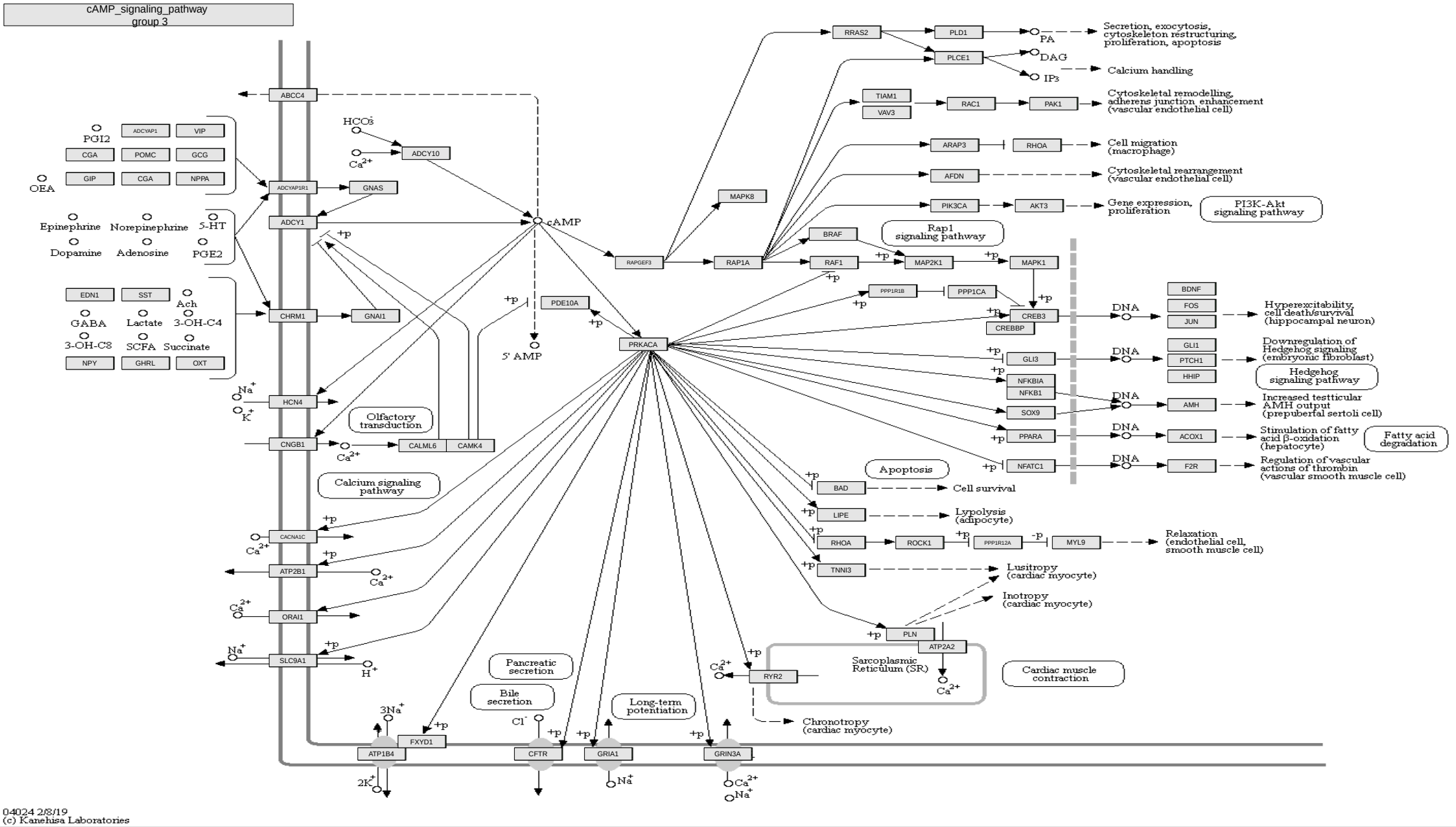
Inotropy (cardiac myocyte)
PLN
ATP2A2
PRKACA
04024 2/8/19
(c) Kanehisa Laboratories



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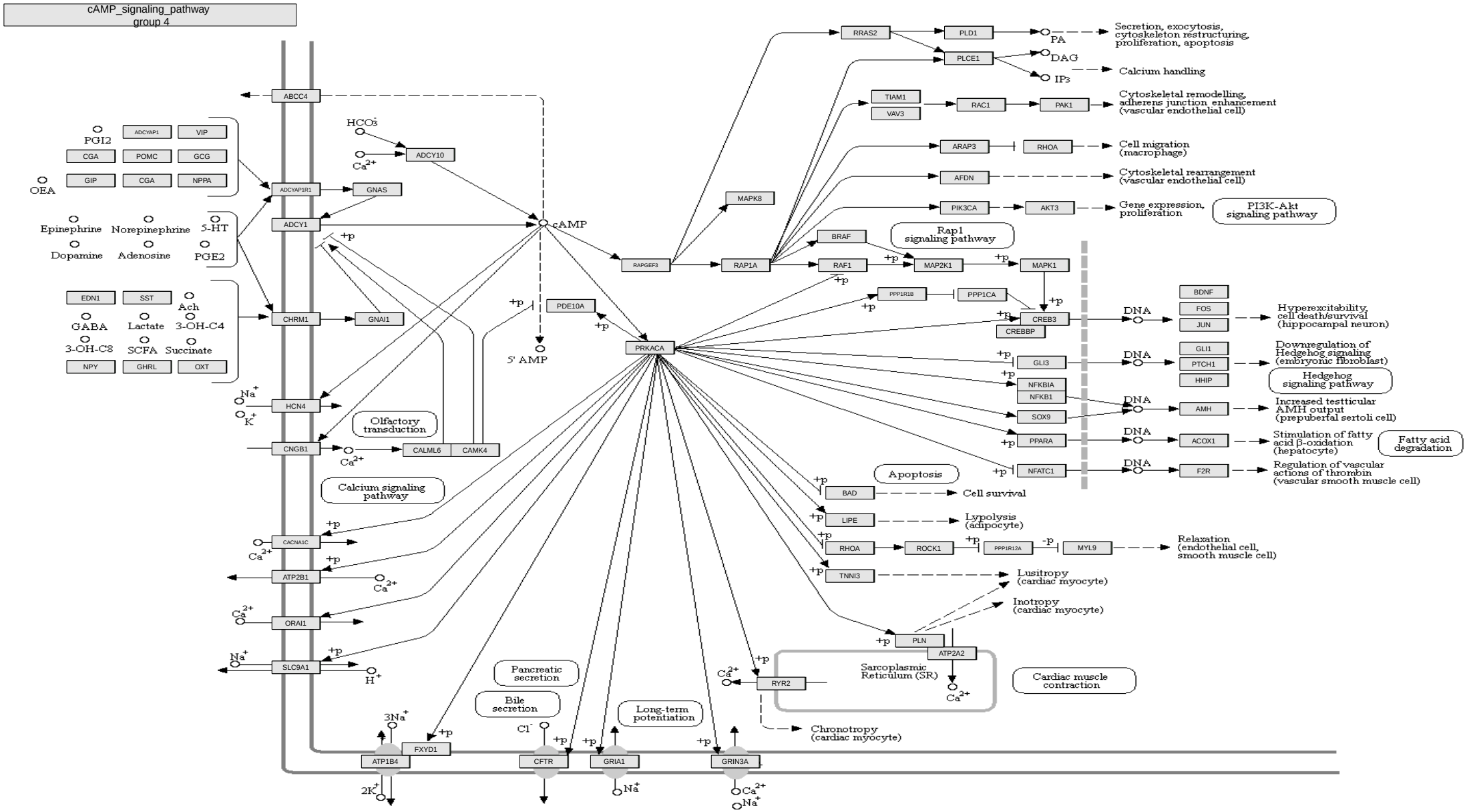
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GCG
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OEA
Epinephrine
Norepinephrine
5-HT
Dopamine
Adenosine
PGE2
EDN1
SST
Ach
GABA
Lactate
3-OH-C4
3-OH-C8
SCFA
Succinate
NPY
GHRL
OXT
HCO3
Ca2+
ADCY10
ADCYAP1R1
GNAS
ADCY1
CHRM1
GNAI1
cAMP
5' AMP
PDE10A
HCN4
Na+
K+
Olfactory transduction
CNGB1
CALML6
CAMK4
Ca2+
Calcium signaling pathway
CACNA1C
ATP2B1
ORAI1
SLC9A1
H+
RRAS2
PLD1
PA
PLCE1
DAG
IP3
Secretion, exocytosis, cytoskeleton restructuring, proliferation, apoptosis
Calcium handling
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VAV3
RAC1
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RAPGEF3
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3Na+
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ATP1B4
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Cl-
CFTR
GRIA1
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Na+
Ca2+
-p
+p
04024 2/8/19
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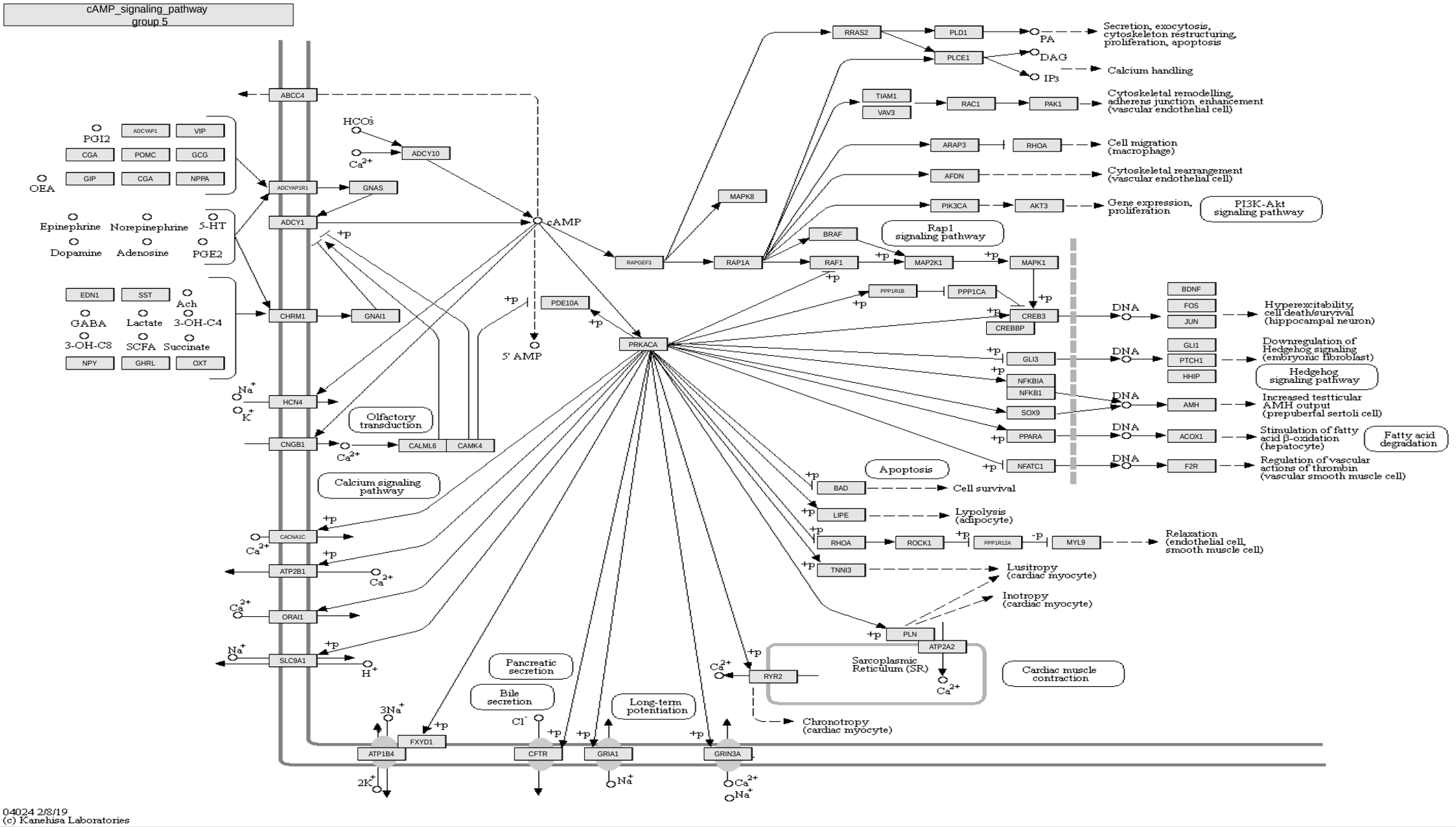
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OEA
Epinephrine
Norepinephrine
5-HT
Dopamine
Adenosine
PGE2
EDN1
SST
Ach
GABA
Lactate
3-OH-C4
3-OH-C8
SCFA
Succinate
NPY
GHRL
OXT
HCO3
Ca2+
ADCY10
ADCYAP1R1
GNAS
ADCY1
CHRM1
GNAI1
cAMP
5' AMP
PDE10A
HCN4
Na+
K+
Olfactory transduction
CNGB1
CALML6
CAMK4
Ca2+
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ORAI1
SLC9A1
H+
RRAS2
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PA
PLCE1
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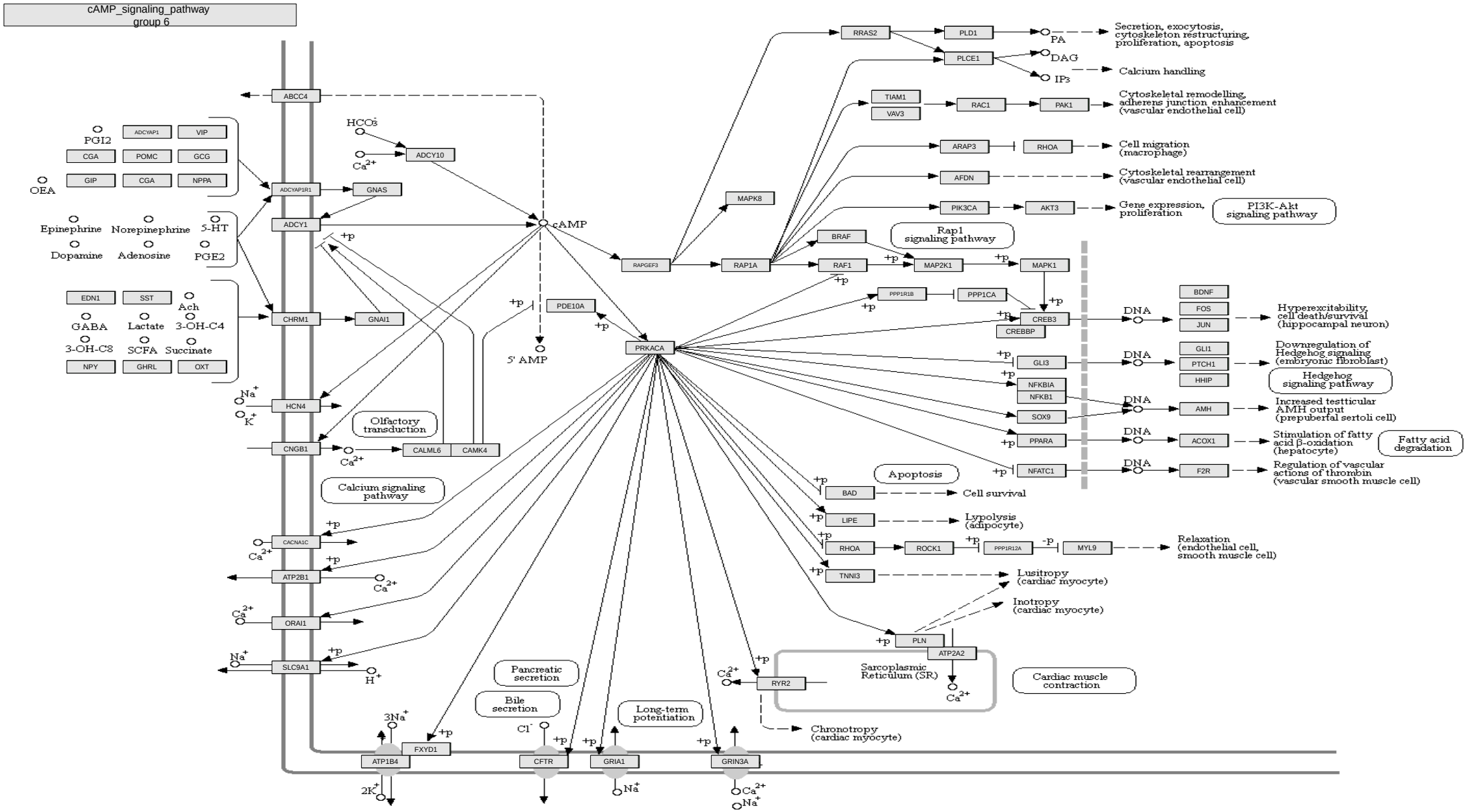
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OEA
Epinephrine
Norepinephrine
5-HT
Dopamine
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PGE2
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SST
Ach
GABA
Lactate
3-OH-C4
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CHRM1
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HCN4
Na+
K+
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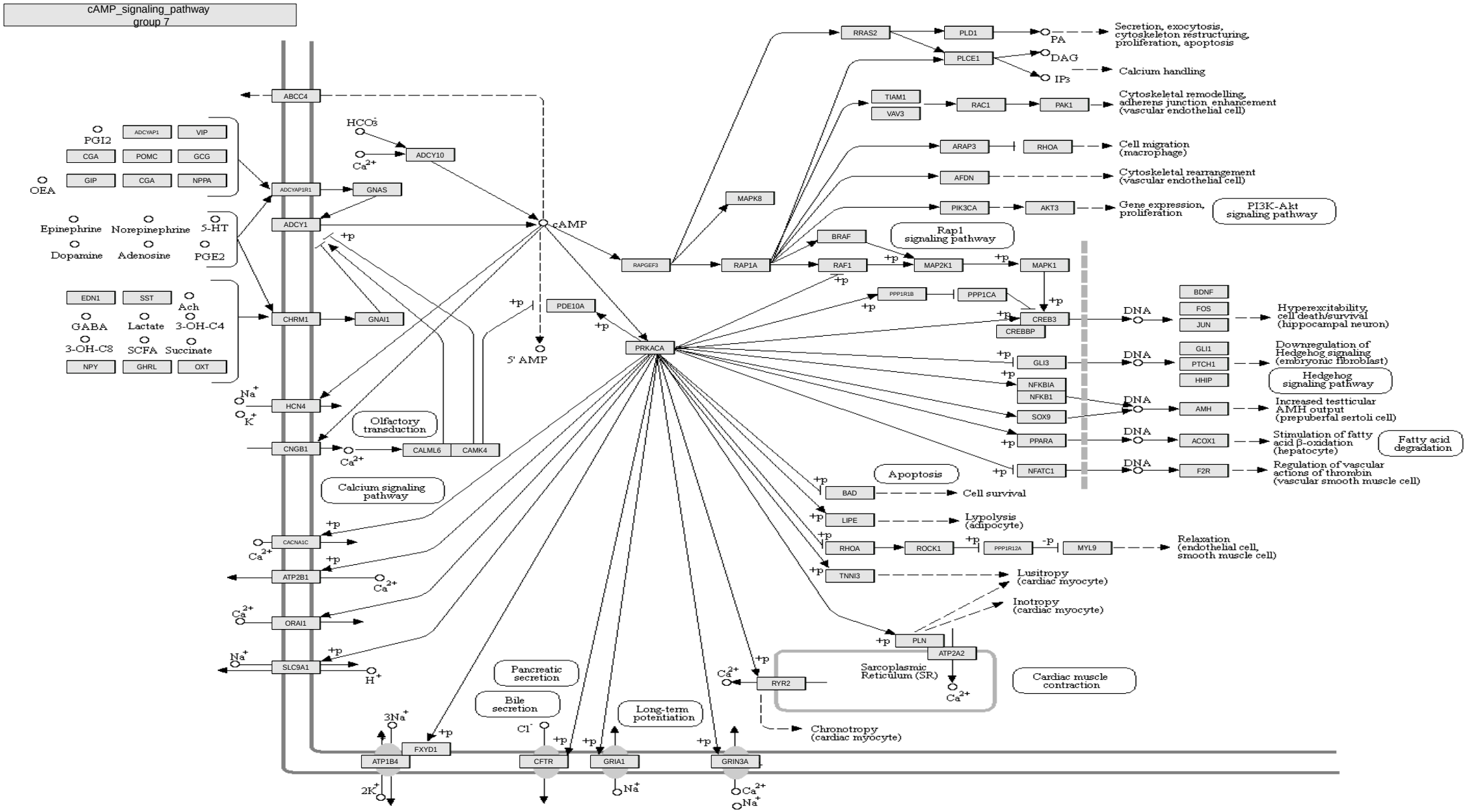
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CGA
POMC
GCG
GIP
CGA
NPPA
OEA
Epinephrine
Norepinephrine
5-HT
Dopamine
Adenosine
PGE2
EDN1
SST
Ach
GABA
Lactate
3-OH-C4
3-OH-C8
SCFA
Succinate
NPY
GHRL
OXT
HCO3
Ca2+
ADCY10
ADCYAP1R1
GNAS
ADCY1
CHRM1
GNAI1
cAMP
5' AMP
PDE10A
HCN4
Na+
K+
Olfactory transduction
CNGB1
CALML6
CAMK4
Ca2+
Calcium signaling pathway
CACNA1C
ATP2B1
ORAI1
SLC9A1
H+
RAPGEF3
MAPK8
RAP1A
RRAS2
PLD1
PA
PLCE1
DAG
IP3
Secretion, exocytosis, cytoskeleton restructuring, proliferation, apoptosis
Calcium handling
TIAM1
VAV3
RAC1
PAK1
Cytoskeletal remodelling, adherens junction enhancement (vascular endothelial cell)
ARAP3
RHOA
Cell migration (macrophage)
AFDN
Cytoskeletal rearrangement (vascular endothelial cell)
PIK3CA
AKT3
Gene expression, proliferation
PI3K-Akt signaling pathway
Rap1 signaling pathway
BRAF
RAF1
MAP2K1
MAPK1
PRKACA
PPP1R1B
PPP1CA
CREB3
CREBBP
DNA
BDNF
FOS
JUN
Hyperexcitability, cell death/survival (hippocampal neuron)
GLI3
GLI1
PTCH1
HHIP
Downregulation of Hedgehog signaling (embryonic fibroblast)
Hedgehog signaling pathway
NFKBIA
NFKB1
SOX9
AMH
Increased testticular AMH output (prepuberfal sertoli cell)
PPARA
ACOX1
Stimulation of fatty acid β-oxidation (hepatocyte)
Fatty acid degradation
NFATC1
F2R
Regulation of vascular actions of thrombin (vascular smooth muscle cell)
Apoptosis
BAD
Cell survival
LIPE
Lypolysis (adipocyte)
RHOA
ROCK1
PPP1R12A
MYL9
Relaxation (endothelial cell, smooth muscle cell)
TNNI3
Lusitropy (cardiac myocyte)
Inotropy (cardiac myocyte)
PLN
ATP2A2
Sarcoplasmic Reticulum (SR)
RYR2
Chronotropy (cardiac myocyte)
Cardiac muscle contraction
Pancreatic secretion
Bile secretion
Long-term potentiation
3Na+
FXYD1
ATP1B4
2K+
Cl-
CFTR
GRIA1
GRIN3A
Na+
Ca2+
04024 2/8/19
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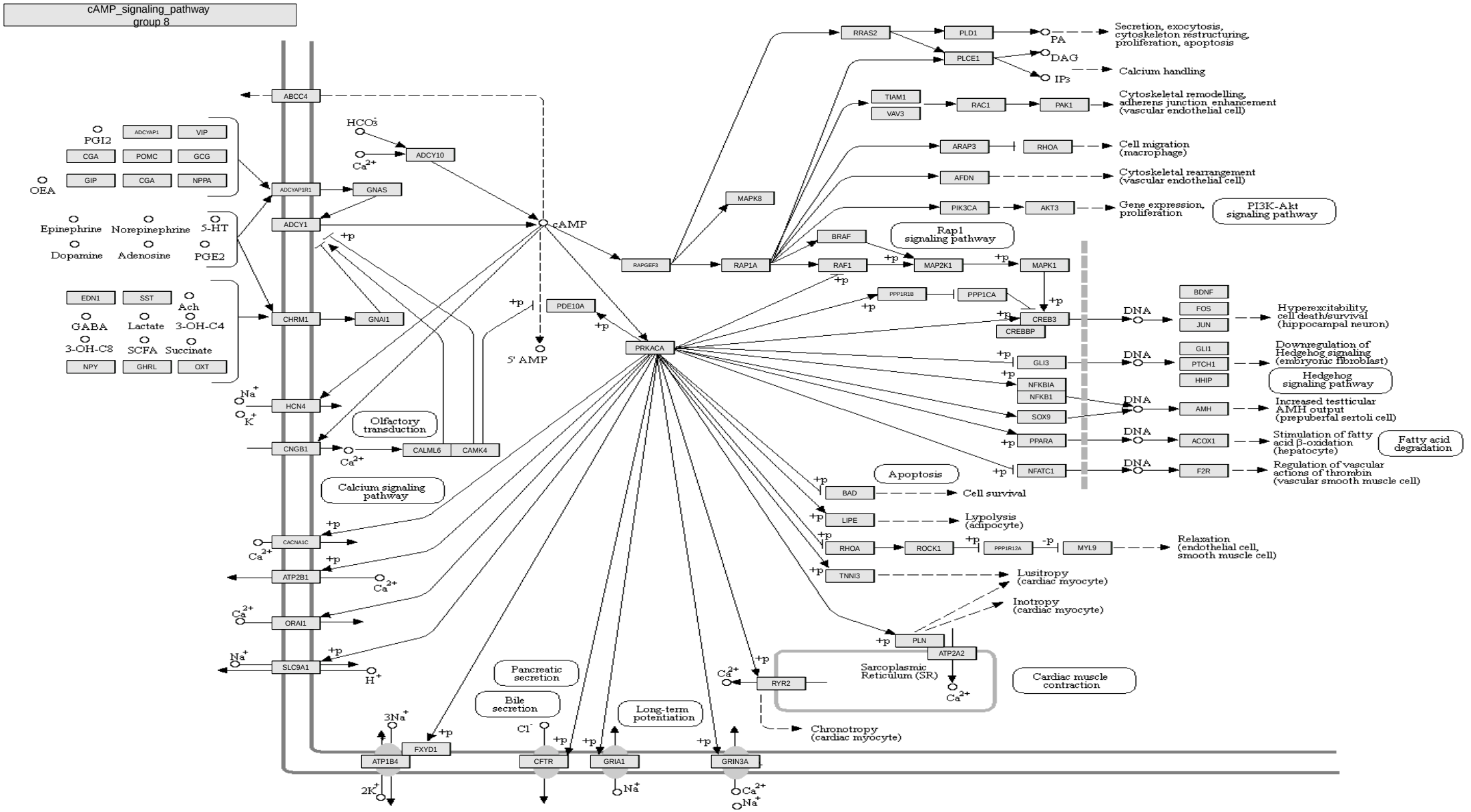
cAMP_signaling_pathway
group 8
ABCC4
PGI2
ADCYAP1
VIP
CGA
POMC
GCG
GIP
CGA
NPPA
OEA
Epinephrine
Norepinephrine
5-HT
Dopamine
Adenosine
PGE2
EDN1
SST
Ach
GABA
Lactate
3-OH-C4
3-OH-C8
SCFA
Succinate
NPY
GHRL
OXT
HCO3
Ca2+
ADCY10
ADCYAP1R1
GNAS
ADCY1
CHRM1
GNAI1
cAMP
5' AMP
PDE10A
+p
Na+
K+
HCN4
Olfactory transduction
CNGB1
CALML6
CAMK4
Ca2+
Calcium signaling pathway
CACNA1C
ATP2B1
ORAI1
SLC9A1
H+
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