

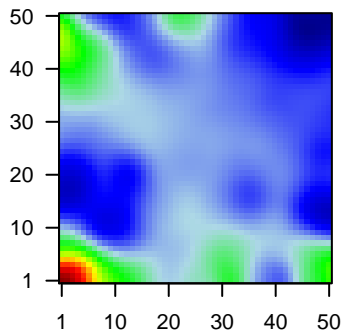
# GW\_076

## Global Summary

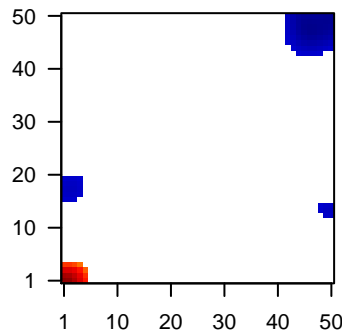
%DE = 0.16  
 # genes with fdr < 0.2 = 1785 ( 1140 + / 645 - )  
 # genes with fdr < 0.1 = 1564 ( 1035 + / 529 - )  
 # genes with fdr < 0.05 = 1276 ( 885 + / 391 - )  
 # genes with fdr < 0.01 = 888 ( 678 + / 210 - )  
 # genes in genesets = 16332

<FC> = 0  
 <shrinkage-t> = 0  
 <p-value> = 0.09  
 <fdr> = 0.84

Profile



Regulated Spots



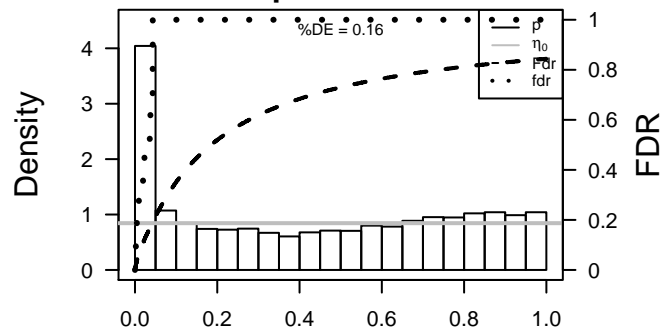
## Global Genelist

| Rank | ID     | log(FC) | fdr p-value | Description | Metagene  |
|------|--------|---------|-------------|-------------|---|
| 1    | 218    | -3.07   | 2e-16 3e-14 | 1 x 50      | aldehyde dehydrogenase 3 family, member A1 [Source:HGNC]                |
| 2    | 23452  | 1.84    | 2e-16 3e-14 | 3 x 1       | angiopoietin-like 2 [Source:HGNC Symbol;Acc:490]                        |
| 3    | 164284 | 1.83    | 2e-16 3e-14 | 1 x 3       | adenomatous polyposis coli down-regulated 1-like [Source:HGNC]          |
| 4    | 366    | 2.29    | 2e-16 3e-14 | 1 x 1       | aquaporin 9 [Source:HGNC Symbol;Acc:643]                                |
| 5    | 650    | 1.71    | 2e-16 3e-14 | 1 x 4       | bone morphogenetic protein 2 [Source:HGNC Symbol;Acc:10]                |
| 6    | 260436 | 2.15    | 2e-16 3e-14 | 50 x 1      | follicular dendritic cell secreted protein [Source:HGNC Symbol;Acc:10]  |
| 7    | 29923  | 2.11    | 2e-16 3e-14 | 4 x 44      | hypoxia inducible lipid droplet-associated [Source:HGNC Symbol;Acc:10]  |
| 8    | 6347   | 1.98    | 2e-16 3e-14 | 50 x 4      | chemokine (C-C motif) ligand 2 [Source:HGNC Symbol;Acc:10]              |
| 9    | 6364   | 3.07    | 2e-16 3e-14 | 46 x 1      | chemokine (C-C motif) ligand 20 [Source:HGNC Symbol;Acc:10]             |
| 10   | 6348   | 2.29    | 2e-16 3e-14 | 4 x 4       | chemokine (C-C motif) ligand 3 [Source:HGNC Symbol;Acc:10]              |
| 11   | 6349   | 1.91    | 2e-16 3e-14 | 5 x 5       | chemokine (C-C motif) ligand 3-like 3 [Source:HGNC Symbol;Acc:10]       |
| 12   | 414062 | 3.13    | 2e-16 3e-14 | 1 x 1       | chemokine (C-C motif) ligand 3-like 3 [Source:HGNC Symbol;Acc:10]       |
| 13   | 9560   | 2.62    | 2e-16 3e-14 | 32 x 1      | chemokine (C-C motif) ligand 4-like 1 [Source:HGNC Symbol;Acc:10]       |
| 14   | 388372 | 2.05    | 2e-16 3e-14 | 32 x 1      | chemokine (C-C motif) ligand 4-like 1 [Source:HGNC Symbol;Acc:10]       |
| 15   | 6355   | 2.02    | 2e-16 3e-14 | 32 x 1      | chemokine (C-C motif) ligand 8 [Source:HGNC Symbol;Acc:10]              |
| 16   | 1041   | 1.97    | 2e-16 3e-14 | 1 x 46      | corneodesmosin [Source:HGNC Symbol;Acc:1802]                            |
| 17   | 4680   | 1.92    | 2e-16 3e-14 | 1 x 50      | carcinoembryonic antigen-related cell adhesion molecule 6 [Source:HGNC] |
| 18   | 1116   | 2.21    | 2e-16 3e-14 | 50 x 4      | chitinase 3-like 1 (cartilage glycoprotein-39) [Source:HGNC]            |
| 19   | 1306   | 1.77    | 2e-16 3e-14 | 4 x 1       | collagen, type XV, alpha 1 [Source:HGNC Symbol;Acc:2192]                |
| 20   | 169044 | 2.26    | 2e-16 3e-14 | 45 x 1      | collagen, type XXII, alpha 1 [Source:HGNC Symbol;Acc:2298]              |

## Global Geneset Analysis

| Rank                  | GSZ    | p-value | #all | Geneset   |
|-----------------------|--------|---------|------|---|
| <i>Overexpressed</i>  |        |         |      |   |
| 1                     | 25.54  | NULL    | 553  | Cancer Lembecke_Colonin Inflammation              |
| 2                     | 22.02  | NULL    | 1182 | CC extracellular region                           |
| 3                     | 20.73  | NULL    | 250  | Lymphocyte_Enz_Stromal signature 1                |
| 4                     | 20.45  | NULL    | 683  | CC extracellular space                            |
| 5                     | 19.22  | NULL    | 265  | Glio wilscher_GBM_Verhaak-CL_expression_B_up      |
| 6                     | 19.22  | NULL    | 265  | Glio wilscher_GBM_Verhaak-MES_expression_B_up     |
| 7                     | 19.22  | NULL    | 265  | Glio wilscher_GBM_Verhaak-PNwt_expression_B_down  |
| 8                     | 19.22  | NULL    | 265  | Glio wilscher_GBM_Verhaak-PNmut_expression_B_down |
| 9                     | 17.85  | NULL    | 190  | CC extracellular matrix                           |
| 10                    | 17.2   | NULL    | 242  | BP extracellular matrix organization              |
| 11                    | 17.2   | NULL    | 312  | BP immune response                                |
| 12                    | 16.26  | NULL    | 572  | Disease GUDJ_poriasis up                          |
| 13                    | 15.54  | NULL    | 269  | BP inflammatory response                          |
| 14                    | 13.99  | NULL    | 69   | BP extracellular matrix disassembly               |
| 15                    | 13.85  | NULL    | 64   | BP collagen catabolic process                     |
| 16                    | 13.14  | NULL    | 274  | Lymphocyte_PANG_IL21 DN                           |
| 17                    | 12.76  | NULL    | 43   | MF chemokine activity                             |
| 18                    | 12.68  | NULL    | 16   | MMML_C6_CIEJ_MMML 1                               |
| 19                    | 12.29  | NULL    | 2659 | CC plasma membrane                                |
| 20                    | 12.1   | NULL    | 111  | BP chemotaxis                                     |
| <i>Underexpressed</i> |        |         |      |   |
| 1                     | -13.88 | NULL    | 142  | Glio wilscher_GBM_Verhaak-CL_expression_C_up      |
| 2                     | -13.88 | NULL    | 142  | Glio wilscher_GBM_Verhaak-PNmut_expression_C_down |
| 3                     | -11.72 | NULL    | 370  | BP mitotic cell cycle                             |
| 4                     | -10.9  | NULL    | 1318 | CC mitochondrion                                  |
| 5                     | -10.3  | NULL    | 649  | BP gene expression                                |
| 6                     | -10.21 | NULL    | 940  | MF nucleic acid binding                           |
| 7                     | -9.79  | NULL    | 4640 | CC nucleus  |
| 8                     | -9.3   | NULL    | 949  | CC nucleoplasm                                    |
| 9                     | -9.3   | NULL    | 595  | MF RNA binding                                    |
| 10                    | -9.14  | NULL    | 149  | BP DNA replication                                |
| 11                    | -9.05  | NULL    | 298  | BP DNA repair                                     |
| 12                    | -8.89  | NULL    | 253  | BP translation                                    |
| 13                    | -8.74  | NULL    | 232  | BP mitosis  |
| 14                    | -8.57  | NULL    | 1233 | TF KIM_MYC targets                                |
| 15                    | -8.39  | NULL    | 153  | MF structural constituent of ribosome             |
| 16                    | -8.37  | NULL    | 242  | BP RNA metabolic process                          |
| 17                    | -8.33  | NULL    | 167  | CC ribosome                                       |
| 18                    | -8.07  | NULL    | 579  | CC nucleolus                                      |
| 19                    | -7.93  | NULL    | 220  | CC mitochondrial matrix                           |
| 20                    | -7.52  | NULL    | 304  | CC mitochondrial inner membrane                   |

p-values



# GW\_076

## Local Summary

%DE = 0.93  
 # metagenes = 19  
 # genes = 275  
 # genes in genesets = 274

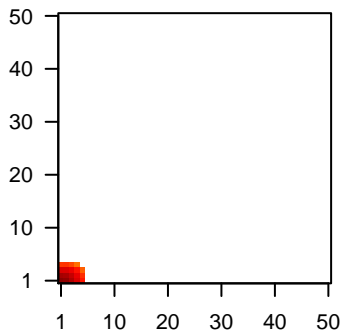
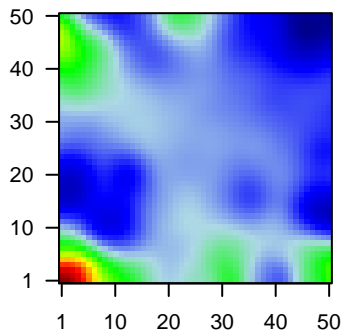
# genes with  $fdr < 0.1 = 245$  ( 245 + / 0 - )  
 # genes with  $fdr < 0.05 = 245$  ( 245 + / 0 - )  
 # genes with  $fdr < 0.01 = 224$  ( 224 + / 0 - )

<r> metagenes = 0.96  
 <r> genes = 0.39

<FC> = 1.08  
 <shrinkage-t> = 37.85  
 <p-value> = 0  
 <fdr> = 0.14

Profile

Spot



## Local Genelist

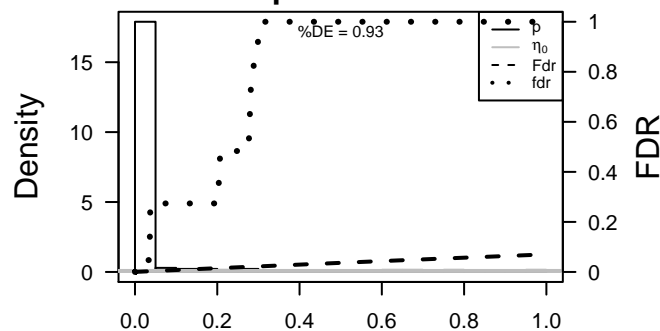
| Rank | ID     | log(FC) | fdr   | p-value | Description   |
|------|--------|---------|-------|---------|---|
| 1    | 23452  | 1.84    | 2e-16 | 1e-16   | 3 x 1 angiopoietin-like 2 [Source:HGNC Symbol;Acc:490]  |
| 2    | 164284 | 1.83    | 2e-16 | 1e-16   | 1 x 3 adenomatosis polyposis coli down-regulated 1-like [Source:HGNC Symbol;Acc:100000]                       |
| 3    | 366    | 2.29    | 2e-16 | 1e-16   | 1 x 1 aquaporin 9 [Source:HGNC Symbol;Acc:643]  |
| 4    | 650    | 1.71    | 2e-16 | 1e-16   | 1 x 4 bone morphogenetic protein 2 [Source:HGNC Symbol;Acc:100000]  |
| 5    | 6348   | 2.29    | 2e-16 | 1e-16   | 4 x 4 chemokine (C-C motif) ligand 3 [Source:HGNC Symbol;Acc:100000]  |
| 6    | 414062 | 3.13    | 2e-16 | 1e-16   | 1 x 1 chemokine (C-C motif) ligand 3-like 3 [Source:HGNC Symbol;Acc:100000]                                   |
| 7    | 1306   | 1.77    | 2e-16 | 1e-16   | 4 x 1 collagen, type XV, alpha 1 [Source:HGNC Symbol;Acc:2192]  |
| 8    | 1281   | 1.91    | 2e-16 | 1e-16   | 2 x 1 collagen, type III, alpha 1 [Source:HGNC Symbol;Acc:2201]   |
| 9    | 1290   | 1.72    | 2e-16 | 1e-16   | 2 x 1 collagen, type V, alpha 2 [Source:HGNC Symbol;Acc:2210]   |
| 10   | 1291   | 1.79    | 2e-16 | 1e-16   | 2 x 1 collagen, type VI, alpha 1 [Source:HGNC Symbol;Acc:2211]  |
| 11   | 1293   | 1.81    | 2e-16 | 1e-16   | 2 x 1 collagen, type VI, alpha 3 [Source:HGNC Symbol;Acc:2213]  |
| 12   | 1437   | 2.34    | 2e-16 | 1e-16   | 1 x 4 colony stimulating factor 2 (granulocyte-macrophage) [Source:HGNC Symbol;Acc:100000]                    |
| 13   | 2919   | 1.73    | 2e-16 | 1e-16   | 1 x 1 chemokine (C-X-C motif) ligand 1 (melanoma growth stimulatory activity) [Source:HGNC Symbol;Acc:100000] |
| 14   | 2920   | 2.13    | 2e-16 | 1e-16   | 1 x 1 chemokine (C-X-C motif) ligand 2 [Source:HGNC Symbol;Acc:100000]  |
| 15   | 6374   | 2.45    | 2e-16 | 1e-16   | 1 x 1 chemokine (C-X-C motif) ligand 5 [Source:HGNC Symbol;Acc:100000]  |
| 16   | 6372   | 2.38    | 2e-16 | 1e-16   | 1 x 1 chemokine (C-X-C motif) ligand 6 [Source:HGNC Symbol;Acc:100000]  |
| 17   | 84624  | 1.74    | 2e-16 | 1e-16   | 3 x 1 fibronectin type III domain containing 1 [Source:HGNC Symbol;Acc:100000]                                |
| 18   | 2619   | 1.87    | 2e-16 | 1e-16   | 2 x 1 growth arrest-specific 1 [Source:HGNC Symbol;Acc:4165]  |
| 19   | 8870   | 2.03    | 2e-16 | 1e-16   | 1 x 3 immediate early response 3 [Source:HGNC Symbol;Acc:5392]  |
| 20   | 3553   | 2.45    | 2e-16 | 1e-16   | 1 x 1 interleukin 1, beta [Source:HGNC Symbol;Acc:5992]   |

## Local Geneset Analysis

Overexpression

| Rank | GSZ   | p-value | #in/all    | Geneset  |
|------|-------|---------|------------|--|
| 1    | 35.05 | NULL    | 63 / 190   | CC extracellular matrix                            |
| 2    | 34.15 | NULL    | 15 / 16    | MMML C6A3CIEJ_MMML 1                               |
| 3    | 32.52 | NULL    | 32 / 69    | BP extracellular matrix disassembly                |
| 4    | 31.84 | NULL    | 67 / 242   | BP extracellular matrix organization               |
| 5    | 30.61 | NULL    | 28 / 64    | BP collagen catabolic process                      |
| 6    | 29.23 | NULL    | 73 / 250   | Lymphocyte ENZ_Stromal signature 1                 |
| 7    | 27.54 | NULL    | 11 / 15    | GSEA C2CROMER_TUMORIGENESIS_UP                     |
| 8    | 26.35 | NULL    | 12 / 16    | GSEA C2FARMER_BREAST_CANCER_CLUSTER_5              |
| 9    | 25.95 | NULL    | 10 / 15    | GSEA C2ONDER_CDH1_TARGETS_2_UP                     |
| 10   | 25.61 | NULL    | 8 / 11     | MF platelet-derived growth factor binding          |
| 11   | 24.1  | NULL    | 82 / 683   | CC extracellular space                             |
| 12   | 22.45 | NULL    | 108 / 1182 | CC extracellular region                            |
| 13   | 22.37 | NULL    | 8 / 12     | miRNA target 29c                                   |
| 14   | 22.35 | NULL    | 7 / 15     | GSEA C2LEE_LIVER_CANCER_HEPATOBLAST                |
| 15   | 21.19 | NULL    | 65 / 553   | Cancer Lembecke_Colonic Inflammation               |
| 16   | 20.75 | NULL    | 38 / 183   | CC proteinaceous extracellular matrix              |
| 17   | 19.77 | NULL    | 20 / 57    | MF extracellular matrix structural constituent     |
| 18   | 19.72 | NULL    | 11 / 19    | MF extracellular matrix binding                    |
| 19   | 19.45 | NULL    | 6 / 10     | GSEA C2VERRECCHIA_RESPONSE_TO_TGFB1_C4             |
| 20   | 19.09 | NULL    | 8 / 15     | GSEA C2DASU_IL6_SIGNALING_SCAR_DN                  |
| 21   | 18.91 | NULL    | 4 / 9      | GSEA C2ZERBINI_RESPONSE_TO_SULINDAC_UP             |
| 22   | 18.83 | NULL    | 43 / 265   | Glio willscher_GBM_Verhaak-CL_expression_B_up      |
| 23   | 18.83 | NULL    | 43 / 265   | Glio willscher_GBM_Verhaak-MES_expression_B_up     |
| 24   | 18.83 | NULL    | 43 / 265   | Glio willscher_GBM_Verhaak-PNwt_expression_B_down  |
| 25   | 18.83 | NULL    | 43 / 265   | Glio willscher_GBM_Verhaak-PNmut_expression_B_down |
| 26   | 18.76 | NULL    | 6 / 13     | GSEA C2FRIDMAN_SENESCENCE_UP                       |
| 27   | 18.52 | NULL    | 15 / 37    | BP collagen fibril organization                    |
| 28   | 18.46 | NULL    | 6 / 13     | GSEA C2TSAI_RESPONSE_TO_RADIATION_THERAPY          |
| 29   | 18.21 | NULL    | 3 / 6      | Glio Martinez_Glio_hypometh                        |
| 30   | 18.02 | NULL    | 8 / 15     | GSEA C2ONDER_CDH1_SIGNALING_VIA_CTNNB1             |
| 31   | 17.92 | NULL    | 7 / 16     | GSEA C2CROONQUIST_STROMAL_STIMULATION_UP           |
| 32   | 16.8  | NULL    | 12 / 40    | BP cellular response to amino acid stimulus        |
| 33   | 16.53 | NULL    | 7 / 11     | Glio Phillips MES up vs Prolif & PN                |
| 34   | 16.51 | NULL    | 5 / 10     | GSEA C2KEGG_ECM_RECEPTOR_INTERACTION               |
| 35   | 16.41 | NULL    | 4 / 12     | GSEA C2BIOCARTA_ERYTH_PATHWAY                      |
| 36   | 16.35 | NULL    | 22 / 83    | CC basement membrane                               |
| 37   | 16.27 | NULL    | 4 / 5      | GSEA C2COLLER_MYC_TARGETS_DN                       |
| 38   | 16.27 | NULL    | 23 / 119   | Lymphocyte ROSOLOWSKI_green total                  |
| 39   | 16.23 | NULL    | 5 / 7      | GSEA C2TSUNODA_CISPLATIN_RESISTANCE_UP             |
| 40   | 16    | NULL    | 6 / 10     | GSEA C2LEON_SMAD6_TARGETS_UP                       |

p-values



# GW\_076

## Local Summary

%DE = 0.94  
 # metagenes = 8  
 # genes = 79  
 # genes in genesets = 79  
 # genes with  $fdr < 0.1$  = 66 ( 4 + / 62 - )  
 # genes with  $fdr < 0.05$  = 58 ( 1 + / 57 - )  
 # genes with  $fdr < 0.01$  = 46 ( 1 + / 45 - )

<r> metagenes = 0.98

<r> genes = 0.34

<FC> = -0.51

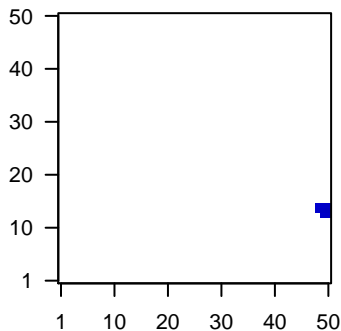
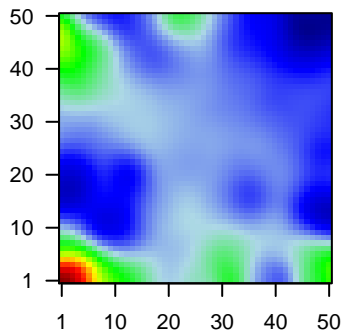
<shrinkage-t> = -17.89

<p-value> = 0

<fdr> = 0.46

Profile

Spot



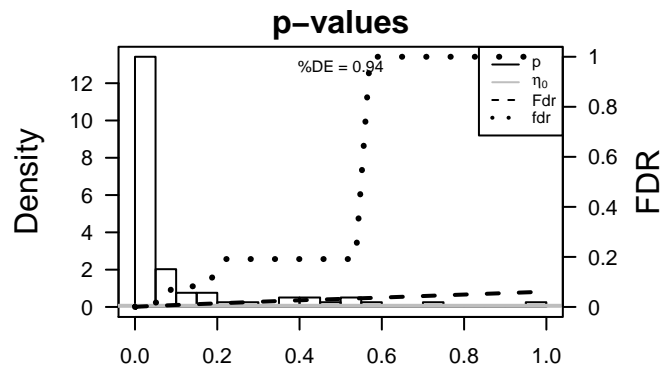
## Local Genelist

| Rank | ID     | log(FC) | fdr   | p-value | Description  |
|------|--------|---------|-------|---------|--|
| 1    | 8857   | -1.8    | 2e-16 | 1e-15   | 50 x 13 Fc fragment of IgG binding protein [Source:HGNC Symbol;Acc:10410]  |
| 2    | 55268  | -1.4    | 2e-11 | 4e-09   | 50 x 14 enoyl CoA hydratase domain containing 2 [Source:HGNC Symbol;Acc:10410]   |
| 3    | 6920   | -1.28   | 8e-10 | 2e-06   | 50 x 13 transcription elongation factor A (SII), 3 [Source:HGNC Symbol;Acc:10410]  |
| 4    | 28958  | -1.04   | 7e-07 | 2e-06   | 49 x 13 cytochrome c oxidase assembly factor 3 [Source:HGNC Symbol;Acc:10410]  |
| 5    | 2568   | -1.02   | 9e-07 | 2e-06   | 50 x 13 gamma-aminobutyric acid (GABA) A receptor, pi [Source:HGNC Symbol;Acc:10410]   |
| 6    | 260293 | -1.01   | 1e-06 | 2e-06   | 50 x 14 cytochrome P450, family 4, subfamily X, polypeptide 1 [Source:HGNC Symbol;Acc:10410]                                 |
| 7    | 6228   | -1      | 2e-06 | 2e-06   | 50 x 14 ribosomal protein S23 [Source:HGNC Symbol;Acc:10410]   |
| 8    | 2139   | -0.99   | 2e-06 | 8e-06   | 50 x 13 eyes absent homolog 2 (Drosophila) [Source:HGNC Symbol;Acc:10410]  |
| 9    | 293    | -0.97   | 4e-06 | 8e-06   | 50 x 15 solute carrier family 25 (mitochondrial carrier; adenine nucleotide carrier) member 1 [Source:HGNC Symbol;Acc:10410] |
| 10   | 2053   | -0.95   | 5e-06 | 1e-05   | 50 x 14 epoxide hydrolase 2, cytoplasmic [Source:HGNC Symbol;Acc:10410]  |
| 11   | 4255   | -0.94   | 7e-06 | 1e-05   | 48 x 15 O-6-methylguanine-DNA methyltransferase [Source:HGNC Symbol;Acc:10410]   |
| 12   | 79762  | -0.93   | 9e-06 | 3e-05   | 50 x 15 chromosome 1 open reading frame 115 [Source:HGNC Symbol;Acc:10410]   |
| 13   | 79085  | -0.9    | 2e-05 | 1e-04   | 50 x 13 solute carrier family 25 (mitochondrial carrier; phosphate carrier) member 1 [Source:HGNC Symbol;Acc:10410]          |
| 14   | 498    | -0.79   | 4e-05 | 2e-04   | 48 x 15 ATP synthase, H+ transporting, mitochondrial F1 complex, alpha subunit [Source:HGNC Symbol;Acc:10410]                |
| 15   | 3033   | -0.82   | 8e-05 | 2e-04   | 50 x 14 hydroxyacyl-CoA dehydrogenase [Source:HGNC Symbol;Acc:10410]   |
| 16   | 55930  | -0.81   | 1e-04 | 1e-03   | 50 x 13 myosin VC [Source:HGNC Symbol;Acc:7604]  |
| 17   | 2205   | -0.74   | 4e-04 | 1e-03   | 50 x 13 Fc fragment of IgE, high affinity I, receptor for; alpha polypeptide [Source:HGNC Symbol;Acc:10410]                  |
| 18   | 66002  | -0.71   | 6e-04 | 1e-03   | 50 x 13 cytochrome P450, family 4, subfamily F, polypeptide 12 [Source:HGNC Symbol;Acc:10410]                                |
| 19   | 84064  | -0.7    | 8e-04 | 1e-03   | 48 x 14 haloacid dehalogenase-like hydrolase domain containing 2 [Source:HGNC Symbol;Acc:10410]                              |
| 20   | 9249   | -0.69   | 1e-03 | 1e-03   | 50 x 13 dehydrogenase/reductase (SDR family) member 3 [Source:HGNC Symbol;Acc:10410]   |

## Local Geneset Analysis

Underexpression

| Rank | GSZ    | p-value | #in/all | Geneset  |
|------|--------|---------|---------|--|
| 1    | -19.33 | NULL    | 1 / 4   | GSEA C2NICK_RESPONSE_TO_PROC_TREATMENT_UP                |
| 2    | -17.93 | NULL    | 2 / 7   | GSEA C2HUPER_BREAST_BASAL_VS_LUMINAL_DN                  |
| 3    | -17.35 | NULL    | 3 / 15  | GSEA C2DOANE_BREAST_CANCER_CLASSES_UP                    |
| 4    | -15.83 | NULL    | 2 / 6   | GSEA C2KAPOSI_LIVER_CANCER_POOR_SURVIVAL_DN              |
| 5    | -14.66 | NULL    | 2 / 15  | GSEA C2ZHAN_MULTIPLE_MYELOMA_CD1_DN                      |
| 6    | -13.69 | NULL    | 2 / 11  | GSEA C2BIOCARTA_ETC_PATHWAY                              |
| 7    | -13.16 | NULL    | 2 / 10  | BP epoxygenase P450 pathway                              |
| 8    | -12.22 | NULL    | 1 / 13  | GSEA C2FONTAINE_FOLLICULAR_THYROID_ADENOMA_UP            |
| 9    | -12.22 | NULL    | 1 / 5   | GSEA C2SMID_BREAST_CANCER_ERBB2_DN                       |
| 10   | -11.71 | NULL    | 1 / 14  | GSEA C2WANG_BARRETTS_ESOPHAGUS_UP                        |
| 11   | -11.44 | NULL    | 2 / 15  | Cancer SOTIRIOU_BREAST_CANCER_GRADE_1_VS_3_DN            |
| 12   | -11.44 | NULL    | 2 / 15  | Cancer SOTIRIOU_BREAST_CANCER_GRADE_1_VS_3_DN            |
| 13   | -11.25 | NULL    | 1 / 15  | GSEA C2FONTAINE_PAPILLARY_THYROID_CARCINOMA_DN           |
| 14   | -11.08 | NULL    | 1 / 10  | GSEA C2YAMASHITA_LIVER_CANCER_WITH_EPCAM_DN              |
| 15   | -10.85 | NULL    | 1 / 16  | GSEA C2WATTEL_AUTONOMOUS_THYROID_ADENOMA_UP              |
| 16   | -10.48 | NULL    | 1 / 11  | GSEA C2LAIHO_COLORECTAL_CANCER_SERRATED_DN               |
| 17   | -10.13 | NULL    | 1 / 3   | miRNA target-223   |
| 18   | -9.68  | NULL    | 2 / 18  | MF aromatase activity                                    |
| 19   | -9.17  | NULL    | 1 / 8   | GSEA C2HEIDENBLAD_AMPLICON_12P11_12_UP                   |
| 20   | -9.1   | NULL    | 1 / 14  | GSEA C2BOYALTY_LIVER_CANCER_SUBCLASS_G123_DN             |
| 21   | -9.1   | NULL    | 2 / 10  | GSEA C2KEGG_ASCORBATE_AND_ALDARATE_METABOLISM            |
| 22   | -9.1   | NULL    | 2 / 10  | GSEA C2KEGG_LIMONENE_AND_PINENE_DEGRADATION              |
| 23   | -9.05  | NULL    | 1 / 12  | BP regulation of DNA-dependent transcription, elongation |
| 24   | -8.85  | NULL    | 3 / 15  | GSEA C2KEGG_PROPANOATE_METABOLISM                        |
| 25   | -8.75  | NULL    | 1 / 15  | GSEA C2GAUSSMANN_MLL_AF4_FUSION_TARGETS_F_UP             |
| 26   | -8.75  | NULL    | 1 / 15  | GSEA C2WALK_AML_CLUSTER_15                               |
| 27   | -8.75  | NULL    | 1 / 15  | GSEA C2CHIANG_LIVER_CANCER_SUBCLASS_PROLIFERATION_DN     |
| 28   | -8.6   | NULL    | 2 / 11  | BP neurotransmitter biosynthetic process                 |
| 29   | -8.57  | NULL    | 2 / 21  | BP drug metabolic process                                |
| 30   | -8.46  | NULL    | 2 / 16  | GSEA C2BOYALTY_LIVER_CANCER_SUBCLASS_G1_UP               |
| 31   | -8.42  | NULL    | 1 / 16  | GSEA C2KOKKINAKIS_METHIONINE_DEPRIVATION_48HR_DN         |
| 32   | -8.42  | NULL    | 1 / 16  | GSEA C2KOKKINAKIS_METHIONINE_DEPRIVATION_96HR_DN         |
| 33   | -8.42  | NULL    | 1 / 16  | GSEA C2ALCALAY_AML_BY_NPM1_LOCALIZATION_UP               |
| 34   | -8.36  | NULL    | 1 / 8   | GSEA C2SCHLESINGER_METHYLATED_IN_COLON_CANCER            |
| 35   | -8.32  | NULL    | 2 / 15  | GSEA C2MARTINEZ_RESPONSE_TO TRABECTEDIN                  |
| 36   | -8.12  | NULL    | 1 / 10  | CC integral to mitochondrial inner membrane              |
| 37   | -8.03  | NULL    | 1 / 10  | MF GABA-A receptor activity                              |
| 38   | -7.82  | NULL    | 1 / 7   | GSEA C2GRAHAM_CML_DIVIDING_VS_NORMAL_QUIESCENT_DN        |
| 39   | -7.81  | NULL    | 2 / 14  | GSEA C2KIM_RESPONSE_TO_TSA_AND_DECITABINE_UP             |
| 40   | -7.76  | NULL    | 2 / 16  | GSEA C2TURASHVILI_BREAST_DUCTAL_CARCINOMA_VS_LOBULAR_DN  |



# GW\_076

## Local Summary

%DE = 0.7  
 # metagenes = 19  
 # genes = 212  
 # genes in genesets = 211

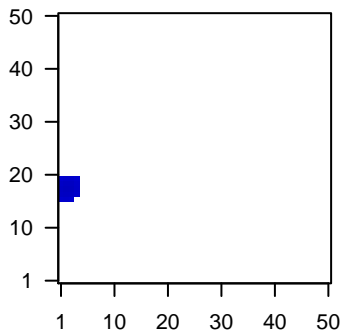
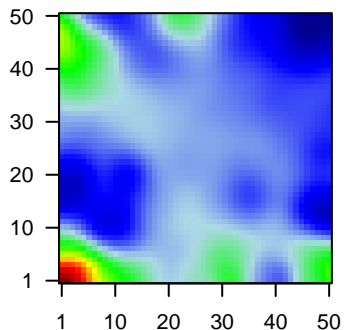
# genes with  $fdr < 0.1 = 93$  ( 3 + / 90 - )  
 # genes with  $fdr < 0.05 = 69$  ( 1 + / 68 - )  
 # genes with  $fdr < 0.01 = 32$  ( 0 + / 32 - )

<r> metagenes = 0.97  
 <r> genes = 0.32

<FC> = -0.37  
 <shrinkage-t> = -12.97  
 <p-value> = 0.03  
 <fdr> = 0.65

Profile

Spot



## Local Genelist

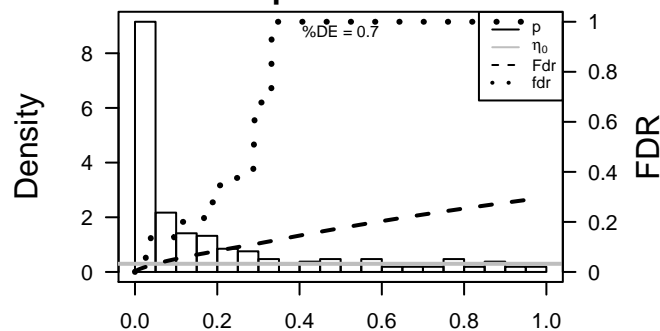
| Rank | ID     | log(FC) | fdr   | p-value | Description  |
|------|--------|---------|-------|---------|--|
| 1    | 2194   | -1.31   | 4e-10 | 2e-05   | 1 x 17 fatty acid synthase [Source:HGNC Symbol;Acc:3594]             |
| 2    | 51373  | -1.06   | 4e-07 | 2e-05   | 1 x 16 28S ribosomal protein S17, mitochondrial; HCG1984214, isof    |
| 3    | 3237   | -1.03   | 7e-07 | 8e-05   | 1 x 16 homeobox D11 [Source:HGNC Symbol;Acc:5134]                    |
| 4    | 991    | -0.97   | 3e-06 | 8e-05   | 1 x 16 cell division cycle 20 [Source:HGNC Symbol;Acc:1723]          |
| 5    | 389541 | -0.97   | 3e-06 | 2e-03   | 3 x 19 late endosomal/lysosomal adaptor, MAPK and MTOR activat       |
| 6    | 57418  | -0.84   | 6e-05 | 2e-03   | 2 x 19 WD repeat domain 18 [Source:HGNC Symbol;Acc:17956]            |
| 7    | 27339  | -0.84   | 6e-05 | 2e-03   | 3 x 18 pre-mRNA processing factor 19 [Source:HGNC Symbol;Acc:        |
| 8    | 10162  | -0.8    | 1e-04 | 2e-03   | 3 x 20 lysophosphatidylcholine acyltransferase 3 [Source:HGNC Syr    |
| 9    | 11331  | -0.78   | 2e-04 | 2e-03   | 4 x 18 prohibitin 2 [Source:HGNC Symbol;Acc:30306]                   |
| 10   | 201254 | -0.78   | 2e-04 | 2e-03   | 4 x 20 stimulated by retinoic acid 13 [Source:HGNC Symbol;Acc:114    |
| 11   | 4704   | -0.77   | 2e-04 | 2e-03   | 3 x 19 NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 9, 3      |
| 12   | 2288   | -0.77   | 2e-04 | 2e-03   | 1 x 19 FK506 binding protein 4, 59kDa [Source:HGNC Symbol;Acc:1      |
| 13   | 113655 | -0.77   | 2e-04 | 2e-03   | 1 x 18 major facilitator superfamily domain containing 3 [Source:HGI |
| 14   | 57109  | -0.77   | 2e-04 | 2e-03   | 1 x 20 REX4, RNA exonuclease 4 homolog (S. cerevisiae) [Source:t     |
| 15   | 11004  | -0.76   | 3e-04 | 2e-03   | 2 x 16 kinesin family member 2C [Source:HGNC Symbol;Acc:6393]        |
| 16   | 430    | -0.76   | 3e-04 | 3e-03   | 2 x 20 achaete-scute family bHLH transcription factor 2 [Source:HG   |
| 17   | 55226  | -0.75   | 3e-04 | 3e-03   | 2 x 17 N-acetyltransferase 10 (GCN5-related) [Source:HGNC Synt       |
| 18   | 284085 | -0.74   | 4e-04 | 3e-03   | 3 x 18 keratin 18 pseudogene 55 [Source:HGNC Symbol;Acc:26874        |
| 19   | 7205   | -0.72   | 6e-04 | 3e-03   | 2 x 16 thyroid hormone receptor interactor 6 [Source:HGNC Symbol     |
| 20   | 30833  | -0.72   | 6e-04 | 3e-03   | 3 x 19 5', 3'-nucleotidase, cytosolic [Source:HGNC Symbol;Acc:171    |

## Local Geneset Analysis

Underexpression

| Rank | GSZ    | p-value | #in/all   | Geneset   |
|------|--------|---------|-----------|---|
| 1    | -13.21 | NULL    | 3 / 9     | GSEA C2MOREIRA_RESPONSE_TO_TSA_UP                       |
| 2    | -11.47 | NULL    | 6 / 19    | CC mitochondrial small ribosomal subunit                |
| 3    | -11.22 | NULL    | 2 / 4     | TF MYC_Cell growth and proliferation UP                 |
| 4    | -11.07 | NULL    | 2 / 9     | GSEA C2KUMAMOTO_RESPONSE_TO_NUTLIN_3A_DN                |
| 5    | -10.18 | NULL    | 2 / 6     | GSEA C2KORKOLA_CHORIOCARCINOMA_UP                       |
| 6    | -10.16 | NULL    | 63 / 1318 | CC mitochondrion  |
| 7    | -10.14 | NULL    | 3 / 15    | GSEA C2KORKOLA_YOLK_SAC_TUMOR_UP                        |
| 8    | -9.73  | NULL    | 20 / 153  | MF structural constituent of ribosome                   |
| 9    | -9.68  | NULL    | 3 / 16    | GSEA C2KORKOLA_EMBRYONAL_CARCINOMA_UP                   |
| 10   | -9.44  | NULL    | 18 / 167  | CC ribosome   |
| 11   | -9.22  | NULL    | 3 / 15    | GSEA C2VANTVEER_BREAST_CANCER_BRCA1_UP                  |
| 12   | -8.64  | NULL    | 2 / 15    | GSEA C2JL_RESPONSE_TO_FSH_UP                            |
| 13   | -8.47  | NULL    | 2 / 7     | GSEA C2PARK_HSC_MARKERS                                 |
| 14   | -8.42  | NULL    | 2 / 15    | GSEA C2DIRMEIER_LMP1_RESPONSE_LATE_UP                   |
| 15   | -8.37  | NULL    | 2 / 15    | GSEA C2Y_AGING_MIDDLE_DN                                |
| 16   | -8.14  | NULL    | 11 / 96   | BP rRNA processing                                      |
| 17   | -8.02  | NULL    | 2 / 16    | GSEA C2WALLACE_PROSTATE_CANCER_UP                       |
| 18   | -7.81  | NULL    | 1 / 10    | MF NADPH binding  |
| 19   | -7.81  | NULL    | 1 / 10    | BP pantothenate metabolic process                       |
| 20   | -7.81  | NULL    | 1 / 10    | BP positive regulation of cellular metabolic process    |
| 21   | -7.81  | NULL    | 1 / 10    | GSEA C2REACTOME_TRIACYLGLYCERIDE_BIOSYNTHESIS           |
| 22   | -7.81  | NULL    | 1 / 10    | GSEA C2REACTOME_VITAMIN_B5_(PANTOTHENATE)_METABOLISM    |
| 23   | -7.62  | NULL    | 1 / 6     | GSEA C2WAESCH_ANAPHASE_PROMOTING_COMPLEX                |
| 24   | -7.56  | NULL    | 18 / 304  | CC mitochondrial inner membrane                         |
| 25   | -7.41  | NULL    | 1 / 11    | GSEA C2WHITESIDE_CISPLATIN_RESISTANCE_UP                |
| 26   | -7.22  | NULL    | 2 / 10    | MF NADH dehydrogenase activity                          |
| 27   | -7.22  | NULL    | 1 / 3     | TF MYC_Tumor suppressor genes UP                        |
| 28   | -7.16  | NULL    | 3 / 16    | GSEA C2WONG_MITOCHONDRIA_GENE_MODULE                    |
| 29   | -7.06  | NULL    | 1 / 12    | Glio willscher_GBM_Verhaak-PNwt_expression_t_up         |
| 30   | -7.06  | NULL    | 1 / 12    | Glio willscher_GBM_Verhaak-PNmut_expression_t_up        |
| 31   | -7.05  | NULL    | 21 / 253  | BP translation  |
| 32   | -6.98  | NULL    | 3 / 16    | GSEA C2SCHLOSSER_MYC_TARGETS_AND_SERUM_RESPONSE_DN      |
| 33   | -6.91  | NULL    | 1 / 8     | GSEA C2MYLLYKANGAS_AMPLIFICATION_HOT_SPOT_25            |
| 34   | -6.88  | NULL    | 4 / 34    | MF NADH dehydrogenase (ubiquinone) activity             |
| 35   | -6.76  | NULL    | 4 / 35    | BP mitochondrial electron transport, NADH to ubiquinone |
| 36   | -6.71  | NULL    | 24 / 579  | CC nucleolus  |
| 37   | -6.65  | NULL    | 4 / 36    | CC mitochondrial respiratory chain complex I            |
| 38   | -6.64  | NULL    | 3 / 16    | GSEA C2RICKMAN_TUMOR_DIFFERENTIATED_MODERATELY_VS_POO   |
| 39   | -6.64  | NULL    | 3 / 16    | GSEA C2RICKMAN_TUMOR_DIFFERENTIATED_MODERATELY_VS_POO   |
| 40   | -6.62  | NULL    | 1 / 5     | GSEA C2NIELSEN_LIPOSARCOMA_DN                           |

p-values



# GW\_076

## Local Summary

%DE = 0.77  
 # metagenes = 67  
 # genes = 738  
 # genes in genesets = 732

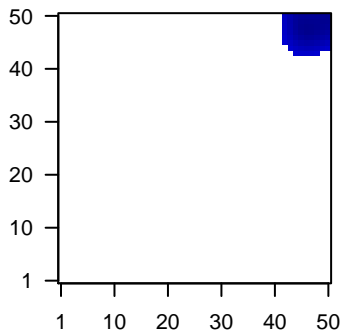
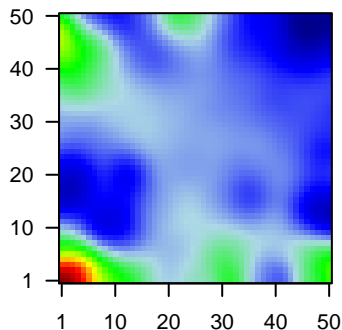
# genes with  $fdr < 0.1$  = 401 ( 11 + / 390 - )  
 # genes with  $fdr < 0.05$  = 274 ( 5 + / 269 - )  
 # genes with  $fdr < 0.01$  = 138 ( 2 + / 136 - )

<r> metagenes = 0.86  
 <r> genes = 0.24

<FC> = -0.4  
 <shrinkage-t> = -14.1  
 <p-value> = 0.02  
 <fdr> = 0.63

Profile

Spot



## Local Genelist

| Rank | ID     | log(FC) | fdr   | p-value | Description   |
|------|--------|---------|-------|---------|---|
| 1    | 256764 | -2.85   | 2e-16 | 4e-14   | 50 x 50 WD repeat domain 72 [Source:HGNC Symbol;Acc:26790]                |
| 2    | 4922   | -1.6    | 1e-14 | 3e-10   | 50 x 50 neurotensin [Source:HGNC Symbol;Acc:8038]                         |
| 3    | 200634 | -1.46   | 2e-12 | 3e-10   | 50 x 49 keratinocyte associated protein 3 [Source:HGNC Symbol;Acc:25975]  |
| 4    | 25975  | 1.45    | 3e-12 | 4e-09   | 48 x 50 EGF-like-domain, multiple 6 [Source:HGNC Symbol;Acc:322]          |
| 5    | 3880   | -1.38   | 3e-11 | 4e-09   | 50 x 49 keratin 19 [Source:HGNC Symbol;Acc:6436]                          |
| 6    | 115749 | -1.37   | 4e-11 | 4e-08   | 50 x 50 chromosome 12 open reading frame 56 [Source:HGNC Synt             |
| 7    | 4072   | -1.32   | 3e-10 | 9e-08   | 50 x 50 epithelial cell adhesion molecule [Source:HGNC Symbol;Acc:339512] |
| 8    | 339512 | -1.28   | 8e-10 | 3e-07   | 50 x 50 chromosome 1 open reading frame 110 [Source:HGNC Synt             |
| 9    | 7153   | -1.24   | 2e-09 | 3e-07   | 45 x 49 topoisomerase (DNA) II alpha 170kDa [Source:HGNC Symbc            |
| 10   | 9133   | -1.23   | 4e-09 | 3e-07   | 45 x 49 cyclin B2 [Source:HGNC Symbol;Acc:1580]                           |
| 11   | 8364   | -1.11   | 6e-09 | 3e-07   | 47 x 46 histone cluster 2, H4a [Source:HGNC Symbol;Acc:4794]              |
| 12   | 56256  | -1.21   | 7e-09 | 1e-06   | 50 x 50 SERTA domain containing 4 [Source:HGNC Symbol;Acc:252]            |
| 13   | 9918   | -1.18   | 2e-08 | 1e-06   | 45 x 49 non-SMC condensin I complex, subunit D2 [Source:HGNC S            |
| 14   | 9055   | -1.17   | 2e-08 | 3e-06   | 45 x 49 protein regulator of cytokinesis 1 [Source:HGNC Symbol;Acc:1870]  |
| 15   | 1870   | -1.13   | 5e-08 | 3e-06   | 46 x 45 E2F transcription factor 2 [Source:HGNC Symbol;Acc:3114]          |
| 16   | 26227  | -1.13   | 6e-08 | 3e-06   | 50 x 46 phosphoglycerate dehydrogenase [Source:HGNC Symbol;Acc:113130]    |
| 17   | 113130 | -1.12   | 7e-08 | 3e-06   | 44 x 49 cell division cycle associated 5 [Source:HGNC Symbol;Acc:139728]  |
| 18   | 139728 | -1.12   | 8e-08 | 5e-06   | 49 x 49 pregnancy up-regulated nonubiquitous CaM kinase [Source:1         |
| 19   | 899    | -1.1    | 1e-07 | 5e-06   | 45 x 46 cyclin F [Source:HGNC Symbol;Acc:1591]                            |
| 20   | 116832 | -1.1    | 1e-07 | 5e-06   | 46 x 50 ribosomal protein L39-like [Source:HGNC Symbol;Acc:17094]         |

## Local Geneset Analysis

Underexpression

| Rank | GSZ    | p-value | #in/all   | Geneset   |
|------|--------|---------|-----------|---|
| 1    | -42.84 | NULL    | 100 / 142 | Glio willscher_GBM_Verhaak-CL_expression_C_up             |
| 2    | -42.84 | NULL    | 100 / 142 | Glio willscher_GBM_Verhaak-PNmut_expression_C_down        |
| 3    | -24.77 | NULL    | 16 / 16   | GSEA C2GUCHI_CELL_CYCLE_RB1_TARGETS                       |
| 4    | -24.52 | NULL    | 118 / 370 | BP mitotic cell cycle                                     |
| 5    | -21.78 | NULL    | 26 / 57   | Glio developing astrocytes                                |
| 6    | -21.11 | NULL    | 55 / 149  | BP DNA replication  |
| 7    | -20.67 | NULL    | 13 / 14   | MMML C6SCIEJ_MMML_4                                       |
| 8    | -20.14 | NULL    | 121 / 530 | Cancer Lembecke_Normal vs Adenoma                         |
| 9    | -20.01 | NULL    | 12 / 16   | GSEA C2FARMER_BREAST_CANCER_CLUSTER_2                     |
| 10   | -19.64 | NULL    | 21 / 30   | BP DNA strand elongation involved in DNA replication      |
| 11   | -18.96 | NULL    | 68 / 232  | BP mitosis  |
| 12   | -18.72 | NULL    | 11 / 15   | Cancer SOTIRIOU_BREAST_CANCER_GRADE_1_VS_3_UP             |
| 13   | -17.94 | NULL    | 9 / 11    | GSEA C2KALMA_E2F1_TARGETS                                 |
| 14   | -17.86 | NULL    | 12 / 13   | GSEA C2CROONQUIST_IL6_DEPRIVATION_DN                      |
| 15   | -17.48 | NULL    | 11 / 14   | GSEA C2ZHAN_MULTIPLE_MYELOMA_PR_UP                        |
| 16   | -17.06 | NULL    | 8 / 10    | GSEA C2MONTERO_THYROID_CANCER_POOR_SURVIVAL_UP            |
| 17   | -16.82 | NULL    | 14 / 16   | GSEA C2FINETTI_BREAST_CANCER_BASAL_VS_LUMINAL             |
| 18   | -16.12 | NULL    | 13 / 15   | GSEA C2FINETTI_BREAST_CANCER_KINOME_RED                   |
| 19   | -15.97 | NULL    | 12 / 16   | GSEA C2REACTOME_DNA_STRAND_ELONGATION                     |
| 20   | -15.88 | NULL    | 12 / 16   | GSEA C2GRAHAM_NORMAL QUIESCENT_VS_NORMAL_DIVIDING_DN      |
| 21   | -15.82 | NULL    | 8 / 11    | GSEA C2REACTOME_UNWINDING_OF_DNA                          |
| 22   | -15.66 | NULL    | 12 / 16   | GSEA C2CROONQUIST_NRAS_SIGNALING_DN                       |
| 23   | -15.65 | NULL    | 11 / 16   | GSEA C2FRASOR_RESPONSE_TO_SERM_OR_FULVESTRANT_DN          |
| 24   | -15.5  | NULL    | 9 / 15    | GSEA C2LY_AGING_MIDDLE_DN                                 |
| 25   | -15.36 | NULL    | 12 / 16   | GSEA C2SCAN_CELL_CYCLE_TARGETS_OF_TP53_AND_TP73_DN        |
| 26   | -15.25 | NULL    | 11 / 16   | GSEA C2SONG_TARGETS_OF_IE86_CMV_PROTEIN                   |
| 27   | -14.99 | NULL    | 12 / 15   | GSEA C2XHANG_CYCLING_GENES                                |
| 28   | -14.95 | NULL    | 10 / 16   | GSEA C2PUJANA_BREAST_CANCER_WITH_BRCA1_MUTATED_UP         |
| 29   | -14.75 | NULL    | 12 / 16   | GSEA C2KANG_DOXORUBICIN_RESISTANCE_UP                     |
| 30   | -14.43 | NULL    | 10 / 15   | GSEA C2LEE_EARLY_T_LYMPHOCYTE_UP                          |
| 31   | -14.38 | NULL    | 10 / 16   | GSEA C2REACTOME_G2_M_CHECKPOINTS                          |
| 32   | -14.27 | NULL    | 8 / 16    | GSEA C2CHIANG_LIVER_CANCER_SUBCLASS_PROLIFERATION_UP      |
| 33   | -14.23 | NULL    | 11 / 15   | GSEA C2MU_APOPTOSIS_BY_CDKN1A_VIA_TP53                    |
| 34   | -14.18 | NULL    | 15 / 21   | BP telomere maintenance via semi-conservative replication |
| 35   | -14.07 | NULL    | 26 / 56   | CC chromosome, centromeric region                         |
| 36   | -13.94 | NULL    | 9 / 11    | GSEA C2JIANG_SILENCED_BY_METHYLATION_DN                   |
| 37   | -13.89 | NULL    | 14 / 22   | BP DNA replication initiation                             |
| 38   | -13.89 | NULL    | 16 / 24   | BP telomere maintenance via recombination                 |
| 39   | -13.69 | NULL    | 59 / 298  | BP DNA repair   |
| 40   | -13.64 | NULL    | 8 / 16    | GSEA C2LY_AGING_PREMATURE_DN                              |

p-values

