

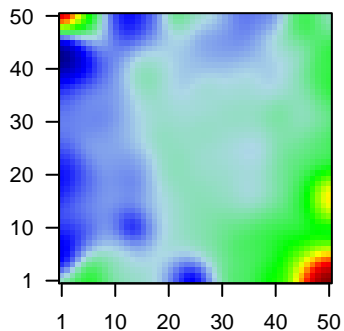
# GW\_154

## Global Summary

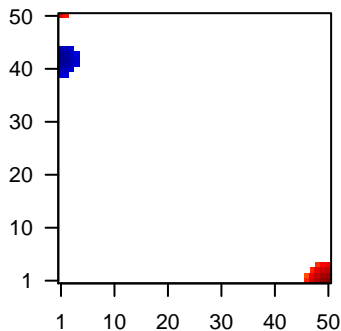
%DE = 0.13  
 # genes with fdr < 0.2 = 1627 ( 966 + / 661 - )  
 # genes with fdr < 0.1 = 1316 ( 821 + / 495 - )  
 # genes with fdr < 0.05 = 1097 ( 705 + / 392 - )  
 # genes with fdr < 0.01 = 789 ( 539 + / 250 - )  
 # genes in genesets = 16332

<FC> = 0  
 <shrinkage-t> = 0  
 <p-value> = 0.1  
 <fdr> = 0.87

Profile



Regulated Spots



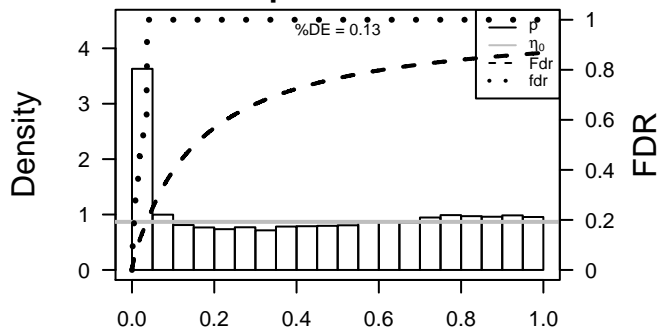
## Global Genelist

| Rank | ID     | log(FC) | fdr p-value | Description Metagene   |
|------|--------|---------|-------------|--|
| 1    | 21     | 1.16    | 2e-16 3e-14 | 50 x 17 ATP-binding cassette, sub-family A (ABC1), member 3 [Sou     |
| 2    | 58     | -1.33   | 2e-16 3e-14 | 25 x 1 actin, alpha 1, skeletal muscle [Source:HGNC Symbol;Acc:12    |
| 3    | 216    | 1.16    | 2e-16 3e-14 | 50 x 50 aldehyde dehydrogenase 1 family, member A1 [Source:HGNC      |
| 4    | 260436 | 3.3     | 2e-16 3e-14 | 50 x 1 follicular dendritic cell secreted protein [Source:HGNC Symbc |
| 5    | 56892  | 1.29    | 2e-16 3e-14 | 50 x 7 chromosome 8 open reading frame 4 [Source:HGNC Symbol         |
| 6    | 375791 | 1.3     | 2e-16 3e-14 | 1 x 50 chromosome 9 open reading frame 169 [Source:HGNC Synt         |
| 7    | 57172  | 2.12    | 2e-16 3e-14 | 49 x 1 calcium/calmodulin-dependent protein kinase IG [Source:HG     |
| 8    | 6364   | 2.97    | 2e-16 3e-14 | 46 x 1 chemokine (C-C motif) ligand 20 [Source:HGNC Symbol;Acc       |
| 9    | 595    | 1.13    | 2e-16 3e-14 | 1 x 6 cyclin D1 [Source:HGNC Symbol;Acc:1582]                        |
| 10   | 930    | 1.27    | 2e-16 3e-14 | 49 x 1 CD19 molecule [Source:HGNC Symbol;Acc:1633]                   |
| 11   | 909    | 1.5     | 2e-16 3e-14 | 50 x 16 CD1a molecule [Source:HGNC Symbol;Acc:1634]                  |
| 12   | 1048   | 1.31    | 2e-16 3e-14 | 2 x 50 carcinoembryonic antigen-related cell adhesion molecule 5 [   |
| 13   | 4680   | 1.28    | 2e-16 3e-14 | 1 x 50 carcinoembryonic antigen-related cell adhesion molecule 6 (   |
| 14   | 1087   | 1.17    | 2e-16 3e-14 | 4 x 50 carcinoembryonic antigen-related cell adhesion molecule 7 [   |
| 15   | 1675   | -1.16   | 2e-16 3e-14 | 50 x 9 complement factor D (adipsin) [Source:HGNC Symbol;Acc:27      |
| 16   | 22802  | 2.12    | 2e-16 3e-14 | 1 x 50 chloride channel accessory 4 [Source:HGNC Symbol;Acc:20       |
| 17   | 9076   | 1.35    | 2e-16 3e-14 | 49 x 50 claudin 1 [Source:HGNC Symbol;Acc:2032]                      |
| 18   | 9071   | 1.64    | 2e-16 3e-14 | 50 x 12 claudin 10 [Source:HGNC Symbol;Acc:2033]                     |
| 19   | 84518  | 1.15    | 2e-16 3e-14 | 1 x 50 cornifelin [Source:HGNC Symbol;Acc:30183]                     |
| 20   | 26047  | 1.16    | 2e-16 3e-14 | 50 x 50 contactin associated protein-like 2 [Source:HGNC Symbol;Ac   |

## Global Geneset Analysis

| Rank                  | GSZ   | p-value | #all | Geneset   |
|-----------------------|-------|---------|------|---|
| <i>Overexpressed</i>  |       |         |      |   |
| 1                     | 19.54 | NULL    | 553  | Cancer Lembecke_Colonic Inflammation                |
| 2                     | 15.9  | NULL    | 135  | H.Tiss WIRTH_Mucosa                                 |
| 3                     | 14.62 | NULL    | 572  | Disease GUDJ_pсориаis up                            |
| 4                     | 13.06 | NULL    | 417  | H.Tiss WIRTH_Immune system                          |
| 5                     | 12.75 | NULL    | 312  | BP immune response                                  |
| 6                     | 11.08 | NULL    | 15   | GSEA C2P2YEON_CANCER_HEAD_AND_NECK_VS_CERVICAL_DN   |
| 7                     | 10.29 | NULL    | 21   | CC cornified envelope                               |
| 8                     | 9.74  | NULL    | 16   | GSEA C2FARMER_BREAST_CANCER_CLUSTER_1               |
| 9                     | 8.93  | NULL    | 111  | BP chemotaxis                                       |
| 10                    | 8.87  | NULL    | 1182 | CC extracellular region                             |
| 11                    | 8.79  | NULL    | 274  | Lympho SPANG_IL21 DN                                |
| 12                    | 8.42  | NULL    | 53   | BP keratinocyte differentiation                     |
| 13                    | 8.14  | NULL    | 9    | GSEA C2GUTIERREZ_WALDENSTREMS_MACROGLOBULINEMIA_1_D |
| 14                    | 8.03  | NULL    | 618  | Chr Chr 4   |
| 15                    | 7.98  | NULL    | 8    | GSEA C2RUNNE_GENDER_EFFECT_UP                       |
| 16                    | 7.9   | NULL    | 7    | MMML C63CIEJ_MMML 5                                 |
| 17                    | 7.75  | NULL    | 162  | CC external side of plasma membrane                 |
| 18                    | 7.64  | NULL    | 16   | GSEA C2MAHADEVAN_RESPONSE_TO_MP470_UP               |
| 19                    | 7.52  | NULL    | 43   | MF chemokine activity                               |
| 20                    | 7.52  | NULL    | 10   | GSEA C2AUJLA_IL22_AND_IL17A_SIGNALING               |
| <i>Underexpressed</i> |       |         |      |   |
| 1                     | -7.93 | NULL    | 633  | Chr Chr 9   |
| 2                     | -7.93 | NULL    | 717  | Chr Chr 16  |
| 3                     | -7.08 | NULL    | 127  | H.Tiss WIRTH_Muscle                                 |
| 4                     | -6.59 | NULL    | 36   | BP muscle filament sliding                          |
| 5                     | -6.46 | NULL    | 519  | Chr Chr 14  |
| 6                     | -5.13 | NULL    | 16   | H.Tiss WIRTH_Hippocampus                            |
| 7                     | -4.94 | NULL    | 44   | MF structural constituent of muscle                 |
| 8                     | -4.6  | NULL    | 16   | CC M band   |
| 9                     | -4.45 | NULL    | 6    | GSEA C2SMID_BREAST_CANCER_RELAPSE_IN_PLEURA_UP      |
| 10                    | -4.42 | NULL    | 84   | BP muscle contraction                               |
| 11                    | -4.35 | NULL    | 12   | CC myosin filament                                  |
| 12                    | -4.11 | NULL    | 39   | BP glycolysis                                       |
| 13                    | -3.82 | NULL    | 1233 | TF KIM_MYC targets                                  |
| 14                    | -3.81 | NULL    | 19   | MF L-ascorbic acid binding                          |
| 15                    | -3.79 | NULL    | 70   | BP cell junction assembly                           |
| 16                    | -3.76 | NULL    | 88   | CC Z disc   |
| 17                    | -3.54 | NULL    | 15   | GSEA C2CROMER_METASTASIS_DN                         |
| 18                    | -3.47 | NULL    | 164  | BP cell death                                       |
| 19                    | -3.44 | NULL    | 7    | GSEA C2YE_METASTATIC_LIVER_CANCER                   |
| 20                    | -3.38 | NULL    | 167  | BP cellular nitrogen compound metabolic process     |

p-values



# GW\_154

## Local Summary

%DE = 0.79  
 # metagenes = 17  
 # genes = 276  
 # genes in genesets = 274

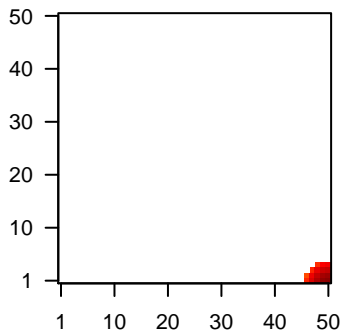
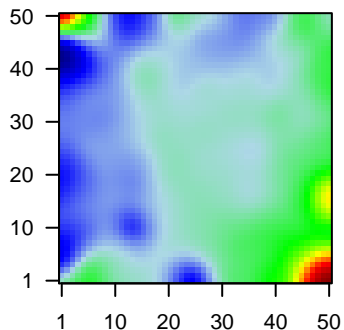
# genes with  $fdr < 0.1 = 203$  ( 195 + / 8 - )  
 # genes with  $fdr < 0.05 = 184$  ( 178 + / 6 - )  
 # genes with  $fdr < 0.01 = 153$  ( 151 + / 2 - )

<r> metagenes = 0.99  
 <r> genes = 0.59

<FC> = 0.55  
 <shrinkage-t> = 19.31  
 <p-value> = 0  
 <fdr> = 0.33

Profile

Spot



## Local Genelist

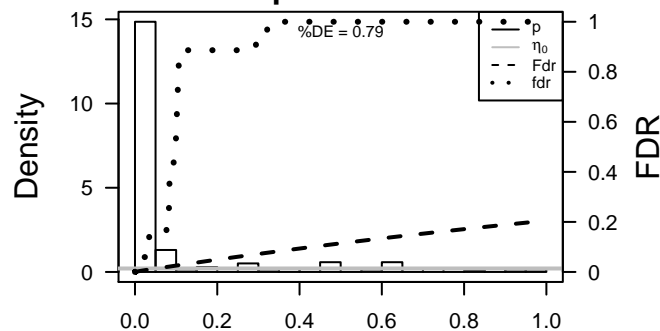
| Rank | ID     | log(FC) | fdr   | p-value | Description   |
|------|--------|---------|-------|---------|---|
| 1    | 260436 | 3.3     | 2e-16 | 5e-16   | 50 x 1 follicular dendritic cell secreted protein [Source:HGNC Symbc  |
| 2    | 57172  | 2.12    | 2e-16 | 5e-16   | 49 x 1 calcium/calmodulin-dependent protein kinase IG [Source:HG      |
| 3    | 6364   | 2.97    | 2e-16 | 5e-16   | 46 x 1 chemokine (C-C motif) ligand 20 [Source:HGNC Symbol;Acc        |
| 4    | 930    | 1.27    | 2e-16 | 5e-16   | 49 x 1 CD19 molecule [Source:HGNC Symbol;Acc:1633]                    |
| 5    | 51755  | 1.92    | 2e-16 | 5e-16   | 49 x 1 cyclin-dependent kinase 12 [Source:HGNC Symbol;Acc:242         |
| 6    | 1545   | 2.91    | 2e-16 | 5e-16   | 50 x 4 cytochrome P450, family 1, subfamily B, polypeptide 1 [Sourc   |
| 7    | 1593   | 1.44    | 2e-16 | 5e-16   | 50 x 3 cytochrome P450, family 27, subfamily A, polypeptide 1 [Sou    |
| 8    | 54855  | 1.69    | 2e-16 | 5e-16   | 49 x 1 family with sequence similarity 46, member C [Source:HGNC      |
| 9    | 51303  | 1.22    | 2e-16 | 5e-16   | 49 x 3 FK506 binding protein 11, 19 kDa [Source:HGNC Symbol;Acc       |
| 10   | 3120   | 1.7     | 2e-16 | 5e-16   | 47 x 1 major histocompatibility complex, class II, DQ beta 2 [Source: |
| 11   | 3512   | 2.81    | 2e-16 | 5e-16   | 50 x 1 immunoglobulin J polypeptide, linker protein for immunoglobu   |
| 12   | 3543   | 1.29    | 2e-16 | 5e-16   | 49 x 1 immunoglobulin lambda-like polypeptide 1 [Source:HGNC S        |
| 13   | 91353  | 1.56    | 2e-16 | 5e-16   | 48 x 1  |
| 14   | 10320  | 1.26    | 2e-16 | 5e-16   | 49 x 1 IKAROS family zinc finger 1 (Ikaros) [Source:HGNC Symbol;A     |
| 15   | 4050   | 1.26    | 2e-16 | 5e-16   | 50 x 1 lymphotoxin beta (TNF superfamily, member 3) [Source:HGNC      |
| 16   | 51237  | 1.71    | 2e-16 | 5e-16   | 48 x 1 marginal zone B and B1 cell-specific protein [Source:HGNC :    |
| 17   | 25849  | 2.19    | 2e-16 | 5e-16   | 50 x 2 prostate androgen-regulated mucin-like protein 1 [Source:HG    |
| 18   | 11040  | 1.8     | 2e-16 | 5e-16   | 49 x 1 pim-2 oncogene [Source:HGNC Symbol;Acc:8987]                   |
| 19   | 5450   | 1.34    | 2e-16 | 5e-16   | 48 x 1 POU class 2 associating factor 1 [Source:HGNC Symbol;Acc       |
| 20   | 5996   | 1.33    | 2e-16 | 5e-16   | 50 x 1 regulator of G-protein signaling 1 [Source:HGNC Symbol;Acc     |

## Local Geneset Analysis

Overexpression

| Rank | GSZ   | p-value | #in/all  | Geneset   |
|------|-------|---------|----------|---|
| 1    | 25.29 | NULL    | 92 / 417 | H.Tiss WIRTH_Immune system  |
| 2    | 23.58 | NULL    | 96 / 553 | Cancer Lembecke_Colonic Inflammation                                  |
| 3    | 22.48 | NULL    | 3 / 5    | GSEA C2WONG_ENDOMETRIAL_CANCER_LATE                                   |
| 4    | 20.21 | NULL    | 9 / 16   | GSEA C2FARMER_BREAST_CANCER_CLUSTER_1                                 |
| 5    | 19.17 | NULL    | 3 / 7    | GSEA C2GRAHAM_CML_DIVIDING_VS_NORMAL_DIVIDING_DN                      |
| 6    | 17.57 | NULL    | 2 / 7    | GSEA C2TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_SUSTAINED                |
| 7    | 17.01 | NULL    | 2 / 8    | GSEA C2REACTOME_ENDOGENOUS_STEROLS                                    |
| 8    | 16.59 | NULL    | 6 / 8    | Glio Donson-migration tethering and rolling-associated with LTS in HG |
| 9    | 16.54 | NULL    | 52 / 312 | BP immune response  |
| 10   | 16.4  | NULL    | 3 / 7    | GSEA C2TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_SUSTAINED                |
| 11   | 15.51 | NULL    | 4 / 8    | GSEA C2GRAHAM_CML_QUIESCENT_VS_NORMAL_DIVIDING_DN                     |
| 12   | 14.39 | NULL    | 7 / 11   | GSEA C2BIOCARTA_TCYTOTOXIC_PATHWAY                                    |
| 13   | 13.66 | NULL    | 44 / 265 | Glio wilscher_GBM_Verhaak-CL_expression_B_up                          |
| 14   | 13.66 | NULL    | 44 / 265 | Glio wilscher_GBM_Verhaak-MES_expression_B_up                         |
| 15   | 13.66 | NULL    | 44 / 265 | Glio wilscher_GBM_Verhaak-PNwt_expression_B_down                      |
| 16   | 13.66 | NULL    | 44 / 265 | Glio wilscher_GBM_Verhaak-PNmut_expression_B_down                     |
| 17   | 13.62 | NULL    | 12 / 15  | CC MHC class II protein complex                                       |
| 18   | 13.52 | NULL    | 6 / 11   | GSEA C2BIOCARTA_THELPER_PATHWAY                                       |
| 19   | 13.49 | NULL    | 2 / 12   | BP sterol metabolic process   |
| 20   | 13.25 | NULL    | 7 / 13   | Cancer GENTLES_modul18  |
| 21   | 13.1  | NULL    | 3 / 13   | GSEA C2HAHTOLA_MYCOSIS_FUNGOIDES_DN                                   |
| 22   | 12.81 | NULL    | 4 / 15   | GSEA C2TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_GRANULOC                 |
| 23   | 12.07 | NULL    | 7 / 15   | GSEA C2FINAK_BREAST_CANCER_SDPP_SIGNATURE                             |
| 24   | 12.01 | NULL    | 25 / 162 | CC external side of plasma membrane                                   |
| 25   | 11.74 | NULL    | 6 / 12   | GSEA C2BIOCARTA_CTL_PATHWAY   |
| 26   | 11.61 | NULL    | 9 / 28   | BP B cell receptor signaling pathway                                  |
| 27   | 11.56 | NULL    | 6 / 16   | LymphomaWRIGHT_ABC UP   |
| 28   | 11.52 | NULL    | 17 / 84  | BP T cell receptor signaling pathway                                  |
| 29   | 11.25 | NULL    | 3 / 11   | GSEA C2GUTIERREZ_CHRONIC_LYMPHOCYTIC_LEUKEMIA_UP                      |
| 30   | 11.21 | NULL    | 3 / 9    | GSEA C2GUTIERREZ_WALDENSTROEMS_MACROGLOBULINEMIA_1_D                  |
| 31   | 11.15 | NULL    | 2 / 16   | GSEA C2GRAHAM_CML_QUIESCENT_VS_NORMAL_DIVIDING_UP                     |
| 32   | 11.03 | NULL    | 6 / 27   | MF antigen binding  |
| 33   | 10.86 | NULL    | 4 / 13   | BP lymph node development   |
| 34   | 10.84 | NULL    | 5 / 14   | GSEA C2FINETTI_BREAST_CANCER_KINOME_GREEN                             |
| 35   | 10.81 | NULL    | 4 / 10   | GSEA C2BIOCARTA_LYM_PATHWAY   |
| 36   | 10.8  | NULL    | 2 / 15   | GSEA C2NAKAJIMA_MAST_CELL   |
| 37   | 10.63 | NULL    | 4 / 8    | GSEA C2BIOCARTA_TCR_PATHWAY   |
| 38   | 10.53 | NULL    | 1 / 9    | GSEA C2BUCKANOVICH_T_LYMPHOCYTE_HOMING_ON_TUMOR_UP                    |
| 39   | 10.45 | NULL    | 18 / 74  | BP regulation of immune response                                      |
| 40   | 10.42 | NULL    | 17 / 60  | BP T cell costimulation   |

p-values



# GW\_154

## Local Summary

%DE = 0.94  
 # metagenes = 2  
 # genes = 71  
 # genes in genesets = 70

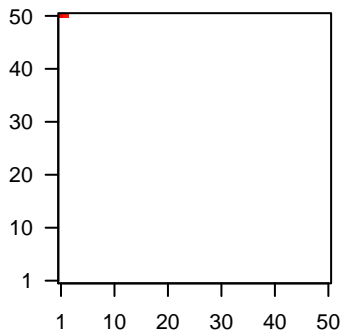
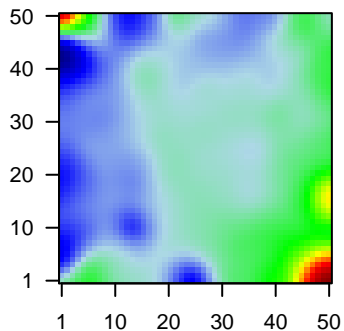
# genes with  $fdr < 0.1 = 63$  ( 60 + / 3 - )  
 # genes with  $fdr < 0.05 = 63$  ( 60 + / 3 - )  
 # genes with  $fdr < 0.01 = 60$  ( 58 + / 2 - )

<r> metagenes = 1  
 <r> genes = 0.58

<FC> = 0.96  
 <shrinkage-t> = 33.83  
 <p-value> = 0  
 <fdr> = 0.13

Profile

Spot



## Local Genelist

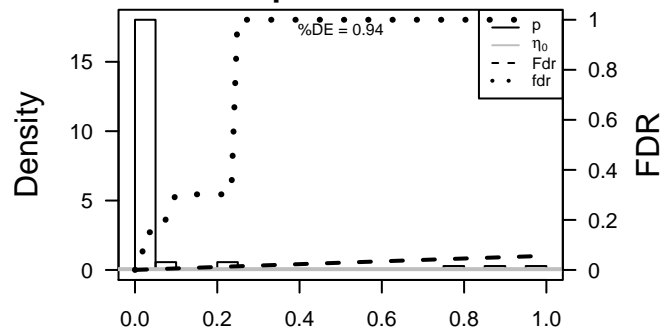
| Rank | ID     | log(FC) | fdr   | p-value | Description  |
|------|--------|---------|-------|---------|--|
| 1    | 375791 | 1.3     | 2e-16 | 3e-17   | 1 x 50 chromosome 9 open reading frame 169 [Source:HGNC Synt       |
| 2    | 1048   | 1.31    | 2e-16 | 3e-17   | 2 x 50 carcinoembryonic antigen-related cell adhesion molecule 5 [ |
| 3    | 4680   | 1.28    | 2e-16 | 3e-17   | 1 x 50 carcinoembryonic antigen-related cell adhesion molecule 6 ( |
| 4    | 22802  | 2.12    | 2e-16 | 3e-17   | 1 x 50 chloride channel accessory 4 [Source:HGNC Symbol;Acc:20     |
| 5    | 84518  | 1.15    | 2e-16 | 3e-17   | 1 x 50 cornifelin [Source:HGNC Symbol;Acc:30183]                   |
| 6    | 49860  | 1.83    | 2e-16 | 3e-17   | 1 x 50 cornulin [Source:HGNC Symbol;Acc:1230]                      |
| 7    | 26085  | 1.91    | 2e-16 | 3e-17   | 1 x 50 kallikrein-related peptidase 13 [Source:HGNC Symbol;Acc:6   |
| 8    | 5653   | 2.11    | 2e-16 | 3e-17   | 1 x 50 kallikrein-related peptidase 6 [Source:HGNC Symbol;Acc:63   |
| 9    | 3860   | 1.42    | 2e-16 | 3e-17   | 1 x 50 keratin 13 [Source:HGNC Symbol;Acc:6415]                    |
| 10   | 3851   | 2.17    | 2e-16 | 3e-17   | 1 x 50 keratin 4 [Source:HGNC Symbol;Acc:6441]                     |
| 11   | 196374 | 1.7     | 2e-16 | 3e-17   | 1 x 50 keratin 78 [Source:HGNC Symbol;Acc:28926]                   |
| 12   | 3934   | 1.54    | 2e-16 | 3e-17   | 1 x 50 lipocalin 2 [Source:HGNC Symbol;Acc:6526]                   |
| 13   | 4118   | 2.28    | 2e-16 | 3e-17   | 1 x 50 mal, T-cell differentiation protein [Source:HGNC Symbol;Acc |
| 14   | 83886  | 1.56    | 2e-16 | 3e-17   | 1 x 50 protease, serine 27 [Source:HGNC Symbol;Acc:15475]          |
| 15   | 6286   | 2.01    | 2e-16 | 3e-17   | 1 x 50 S100 calcium binding protein P [Source:HGNC Symbol;Acc:1    |
| 16   | 57152  | 1.39    | 2e-16 | 3e-17   | 1 x 50 secreted LY6/PLAUR domain containing 1 [Source:HGNC Sy      |
| 17   | 11005  | 1.32    | 2e-16 | 3e-17   | 1 x 50 serine peptidase inhibitor, Kazal type 5 [Source:HGNC Symb  |
| 18   | 6700   | 1.28    | 2e-16 | 3e-17   | 1 x 50 small proline-rich protein 2A [Source:HGNC Symbol;Acc:112   |
| 19   | 6702   | 1.73    | 2e-16 | 3e-17   | 1 x 50   |
| 20   | 6704   | 1.85    | 2e-16 | 3e-17   | 1 x 50 small proline-rich protein 2E [Source:HGNC Symbol;Acc:112   |

## Local Geneset Analysis

Overexpression

| Rank | GSZ   | p-value | #in/all  | Geneset   |
|------|-------|---------|----------|---|
| 1    | 43.97 | NULL    | 39 / 135 | H.Tiss WIRTH_Mucosa   |
| 2    | 36.69 | NULL    | 10 / 21  | CC cornified envelope   |
| 3    | 32.15 | NULL    | 11 / 42  | BP keratinization   |
| 4    | 27.25 | NULL    | 7 / 19   | BP peptide cross-linking  |
| 5    | 26.55 | NULL    | 12 / 53  | BP keratinocyte differentiation   |
| 6    | 21.24 | NULL    | 4 / 16   | GSEA C2CROMER_TUMORIGENESIS_DN  |
| 7    | 19.78 | NULL    | 4 / 15   | GSEA C2HINATA_NFKB_TARGETS_KERATINOCYTE_DN                                |
| 8    | 18.04 | NULL    | 3 / 16   | GSEA C2WANG_BARRETTES_ESOPHAGUS_DN  |
| 9    | 16.78 | NULL    | 9 / 76   | BP epidermis development  |
| 10   | 15.23 | NULL    | 29 / 572 | Disease GUDJ_psooriasis up  |
| 11   | 14.3  | NULL    | 9 / 122  | MF serine-type endopeptidase activity                                     |
| 12   | 11.92 | NULL    | 3 / 15   | GSEA C2LEE_LIVER_CANCER_MYC_E2F1_UP                                       |
| 13   | 11.43 | NULL    | 3 / 44   | CC keratin filament   |
| 14   | 11.26 | NULL    | 10 / 186 | MF structural molecule activity   |
| 15   | 11.18 | NULL    | 1 / 6    | GSEA C2SARRIO_EPITHELIAL_MESENCHYMAL_TRANSITION_DN                        |
| 16   | 10.93 | NULL    | 1 / 11   | Glio VERHAAK_Brain  |
| 17   | 10.72 | NULL    | 2 / 16   | GSEA C2ONDER_CDH1_TARGETS_3_DN  |
| 18   | 10.72 | NULL    | 2 / 16   | GSEA C2CHEOK_RESPONSE_TO_MERCAPTOPURINE_AND_LD_MTX_1                      |
| 19   | 10.64 | NULL    | 2 / 15   | GSEA C2RICKMAN_HEAD_AND_NECK_CANCER_E                                     |
| 20   | 10.59 | NULL    | 2 / 15   | GSEA C2CHANG_IMMORTALIZED_BY_HPV31_DN                                     |
| 21   | 10.39 | NULL    | 1 / 8    | GSEA C2JIU_CDX2_TARGETS_DN  |
| 22   | 10.33 | NULL    | 1 / 12   | MF channel activity   |
| 23   | 10.21 | NULL    | 3 / 38   | BP epithelial cell differentiation  |
| 24   | 10.2  | NULL    | 1 / 10   | MF RAGE receptor binding  |
| 25   | 10.01 | NULL    | 1 / 11   | GSEA C2ROME_INSULIN_TARGETS_IN_MUSCLE_DN                                  |
| 26   | 10.01 | NULL    | 2 / 38   | BP myelination  |
| 27   | 9.81  | NULL    | 1 / 13   | GSEA C2HASLINGER_B_CLL_WITH_MUTATED_VH_GENES                              |
| 28   | 9.81  | NULL    | 3 / 13   | BP negative regulation of peptidase activity                              |
| 29   | 9.5   | NULL    | 2 / 22   | BP endothelial cell migration   |
| 30   | 9.49  | NULL    | 3 / 27   | BP response to bacterium  |
| 31   | 9.46  | NULL    | 1 / 12   | GSEA C2ODONNELL_METASTASIS_DN   |
| 32   | 9.46  | NULL    | 1 / 12   | GSEA C2SYED ESTRADIOL_RESPONSE  |
| 33   | 9.08  | NULL    | 1 / 8    | GSEA C2MILICIC_FAMILIAL_ADENOMATOUS_POLYPOSIS_UP                          |
| 34   | 8.96  | NULL    | 1 / 15   | BP positive regulation of extrinsic apoptotic signaling pathway via death |
| 35   | 8.96  | NULL    | 1 / 15   | GSEA C2ALONSO_METASTASIS_NEURAL_UP  |
| 36   | 8.96  | NULL    | 1 / 15   | GSEA C2BIOCARTA_MAL_PATHWAY   |
| 37   | 8.63  | NULL    | 1 / 14   | BP tissue regeneration  |
| 38   | 8.62  | NULL    | 2 / 16   | BP cobalamin metabolic process  |
| 39   | 8.61  | NULL    | 1 / 16   | Cancer GENTLES_modul11  |
| 40   | 8.6   | NULL    | 1 / 13   | GSEA C2HAHTOLA_CTCL_PATHOGENESIS  |

p-values



# GW\_154

## Local Summary

%DE = 0.82  
 # metagenes = 20  
 # genes = 224  
 # genes in genesets = 221  
 # genes with  $fdr < 0.1$  = 150 ( 5 + / 145 - )  
 # genes with  $fdr < 0.05$  = 135 ( 5 + / 130 - )  
 # genes with  $fdr < 0.01$  = 95 ( 3 + / 92 - )

$\langle r \rangle$  metagenes = 0.98

$\langle r \rangle$  genes = 0.34

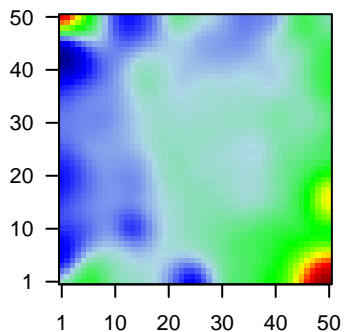
$\langle FC \rangle = -0.36$

$\langle \text{shrinkage-t} \rangle = -12.6$

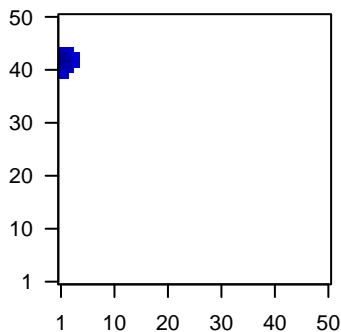
$\langle p\text{-value} \rangle = 0$

$\langle fdr \rangle = 0.48$

Profile



Spot



## Local Genelist

| Rank | ID     | log(FC) | fdr   | p-value | Description   |
|------|--------|---------|-------|---------|---|
| 1    | 1515   | -1.44   | 2e-16 | 1e-15   | 1 x 44 cathepsin V [Source:HGNC Symbol;Acc:2538]                        |
| 2    | 2167   | -1.56   | 2e-16 | 1e-15   | 1 x 44 fatty acid binding protein 4, adipocyte [Source:HGNC Symbol]     |
| 3    | 3306   | -1.17   | 2e-16 | 1e-15   | 1 x 42 heat shock 70kDa protein 2 [Source:HGNC Symbol;Acc:5235]         |
| 4    | 3489   | -1.72   | 2e-16 | 1e-15   | 1 x 44 insulin-like growth factor binding protein 6 [Source:HGNC Sy     |
| 5    | 50805  | -1.32   | 2e-16 | 1e-15   | 1 x 43 iroquois homeobox 4 [Source:HGNC Symbol;Acc:6129]                |
| 6    | 55214  | -1.46   | 2e-16 | 1e-15   | 1 x 42 leprecan-like 1 [Source:HGNC Symbol;Acc:19317]                   |
| 7    | 6513   | -1.24   | 2e-16 | 1e-15   | 1 x 43 solute carrier family 2 (facilitated glucose transporter), membe |
| 8    | 144406 | -1.33   | 2e-16 | 1e-15   | 1 x 42 WD repeat domain 66 [Source:HGNC Symbol;Acc:28506]               |
| 9    | 5744   | -1.09   | 6e-15 | 1e-11   | 1 x 43 parathyroid hormone-like hormone [Source:HGNC Symbol;A           |
| 10   | 116211 | -1.02   | 3e-13 | 1e-11   | 1 x 43 Transmembrane 4 L6 family member 19 [Source:UniProtKB/           |
| 11   | 51200  | -1.01   | 5e-13 | 4e-11   | 1 x 44 carboxypeptidase A4 [Source:HGNC Symbol;Acc:15740]               |
| 12   | 7498   | 0.99    | 1e-12 | 6e-11   | 3 x 43 xanthine dehydrogenase [Source:HGNC Symbol;Acc:12805]            |
| 13   | 3775   | -0.98   | 3e-12 | 1e-10   | 1 x 43 potassium channel, subfamily K, member 1 [Source:HGNC S          |
| 14   | 4015   | -0.97   | 5e-12 | 1e-10   | 1 x 41 lysyl oxidase [Source:HGNC Symbol;Acc:6664]                      |
| 15   | 387882 | -0.95   | 1e-11 | 1e-10   | 2 x 41 chromosome 12 open reading frame 75 [Source:HGNC Synt            |
| 16   | 113146 | -0.95   | 1e-11 | 4e-09   | 1 x 44 AHNK nucleoprotein 2 [Source:HGNC Symbol;Acc:20125]              |
| 17   | 80149  | 0.9     | 1e-10 | 2e-08   | 1 x 39 zinc finger CCCH-type containing 12A [Source:HGNC Symb           |
| 18   | 10397  | -0.8    | 6e-10 | 1e-07   | 1 x 42 N-myc downstream regulated 1 [Source:HGNC Symbol;Acc:1           |
| 19   | 90102  | -0.83   | 3e-09 | 2e-07   | 1 x 42 pleckstrin homology-like domain, family B, member 2 [Sourc       |
| 20   | 404203 | -0.81   | 9e-09 | 2e-07   | 1 x 43 serine peptidase inhibitor, Kazal type 6 [Source:HGNC Symb       |

## Local Geneset Analysis

Underexpression

| Rank | GSZ    | p-value | #in/all | Geneset   |
|------|--------|---------|---------|---|
| 1    | -14.5  | NULL    | 1 / 5   | GSEA C2BUSA_SAM68_TARGETS_UP  |
| 2    | -12.36 | NULL    | 2 / 5   | GSEA C2FERRARI_RESPONSE_TO_FENRETINIDE_DN                               |
| 3    | -12.15 | NULL    | 2 / 15  | GSEA C2KANG_CISPLATIN_RESISTANCE_UP                                     |
| 4    | -11.94 | NULL    | 1 / 7   | GSEA C2YE_METASTATIC_LIVER_CANCER                                       |
| 5    | -11.79 | NULL    | 2 / 16  | Glio VERHAAK_MES subtype  |
| 6    | -10.94 | NULL    | 2 / 2   | miRNA target-199a*  |
| 7    | -10.62 | NULL    | 4 / 25  | BP brown fat cell differentiation                                       |
| 8    | -10.36 | NULL    | 1 / 5   | GSEA C2RODRIGUES_DCC_TARGETS_UP   |
| 9    | -9.83  | NULL    | 1 / 2   | miRNA target-346  |
| 10   | -9.62  | NULL    | 2 / 11  | GSEA C2BIOCARTA_VITCB_PATHWAY   |
| 11   | -9.52  | NULL    | 3 / 15  | GSEA C2FARMER_BREAST_CANCER_CLUSTER_3                                   |
| 12   | -9.17  | NULL    | 3 / 16  | GSEA C2FARMER_BREAST_CANCER_CLUSTER_4                                   |
| 13   | -9.04  | NULL    | 4 / 12  | BP hemidesmosome assembly   |
| 14   | -8.81  | NULL    | 1 / 10  | BP white fat cell differentiation                                       |
| 15   | -8.76  | NULL    | 1 / 12  | GSEA C2SANCHEZ_MDM2_TARGETS   |
| 16   | -8.62  | NULL    | 4 / 16  | GSEA C2ELVIDGE_HIF1A_AND_HIF2A_TARGETS_DN                               |
| 17   | -8.53  | NULL    | 4 / 16  | GSEA C2HUPER_BREAST_BASAL_VS_LUMINAL_UP                                 |
| 18   | -8.4   | NULL    | 1 / 8   | GSEA C2NIKOLSKY_BREAST_CANCER_5P15_AMPLICON                             |
| 19   | -8.37  | NULL    | 1 / 13  | GSEA C2REACTOME_REGULATION_OF_INSULIN_LIKE_GROWTH_FACT                  |
| 20   | -8.37  | NULL    | 4 / 16  | GSEA C2ELVIDGE_HIF1A_TARGETS_DN   |
| 21   | -8.34  | NULL    | 1 / 11  | GSEA C2REACTOME_HORMONE_SENSITIVE_LIPASE_HSL_MEDIATED                   |
| 22   | -8.18  | NULL    | 2 / 19  | MF L-ascorbic acid binding  |
| 23   | -8.06  | NULL    | 1 / 5   | GSEA C2ELVIDGE_HIF2A_TARGETS_UP   |
| 24   | -7.93  | NULL    | 1 / 12  | MF fatty acid binding   |
| 25   | -7.87  | NULL    | 1 / 8   | GSEA C2REACTOME_FACILITATIVE_NA_INDEPENDENT_GLUCOSE_TR                  |
| 26   | -7.7   | NULL    | 1 / 15  | GSEA C2ZIRN_TRETINOIN_RESPONSE_WT1_UP                                   |
| 27   | -7.66  | NULL    | 3 / 15  | GSEA C2SENESE_HDAC1_AND_HDAC2_TARGETS_DN                                |
| 28   | -7.57  | NULL    | 1 / 13  | BP cellular response to lithium ion                                     |
| 29   | -7.5   | NULL    | 1 / 7   | GSEA C2BEGUM_TARGETS_OF_PAX3_FOXO1_FUSION_AND_PAX3                      |
| 30   | -7.34  | NULL    | 3 / 15  | GSEA C2PRAMOONJAGO_SOX4_TARGETS_UP                                      |
| 31   | -7.22  | NULL    | 1 / 5   | GSEA C2KYNG_ENVIRONMENTAL_STRESS_RESPONSE_NOT_BY_4NC                    |
| 32   | -7.13  | NULL    | 2 / 15  | BP response to osmotic stress   |
| 33   | -6.97  | NULL    | 1 / 13  | BP nerve development  |
| 34   | -6.97  | NULL    | 1 / 15  | BP triglyceride catabolic process                                       |
| 35   | -6.91  | NULL    | 3 / 29  | MF oxidoreductase activity, acting on paired donors, with incorporation |
| 36   | -6.82  | NULL    | 2 / 15  | GSEA C2KANG_FLUOROURACIL_RESISTANCE_DN                                  |
| 37   | -6.81  | NULL    | 9 / 76  | BP epidermis development  |
| 38   | -6.7   | NULL    | 1 / 7   | GSEA C2WEINMANN_ADAPTATION_TO_HYPOXIA_UP                                |
| 39   | -6.68  | NULL    | 1 / 14  | BP multicellular organismal aging                                       |
| 40   | -6.59  | NULL    | 2 / 6   | GSEA C2WALLACE_PROSTATE_CANCER_DN                                       |

p-values

