## 差集gene list分析（1018）

通路富集分析，选择数据库KEGG PATHWAY, Reactome, Biocyc, Panther，选取校正p值的前20位位于下表：

表1 EMT基因富集的通路

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| #Term | Database | Input number | Background number | Corrected P-Value |
| MicroRNAs in cancer | KEGG PATHWAY | 95 | 299 | 1.44E-71 |
| Signal Transduction | Reactome | 186 | 2448 | 5.01E-52 |
| Developmental Biology | Reactome | 90 | 841 | 1.88E-33 |
| Pathways in cancer | KEGG PATHWAY | 57 | 397 | 2.22E-26 |
| Immune System | Reactome | 108 | 1583 | 5.11E-25 |
| Chemokine signaling pathway | KEGG PATHWAY | 35 | 187 | 3.91E-19 |
| Hemostasis | Reactome | 58 | 605 | 4.35E-19 |
| Innate Immune System | Reactome | 65 | 769 | 6.41E-19 |
| PI3K-Akt signaling pathway | KEGG PATHWAY | 43 | 342 | 6.33E-18 |
| Cytokine-cytokine receptor interaction | KEGG PATHWAY | 38 | 265 | 1.62E-17 |
| HTLV-I infection | KEGG PATHWAY | 37 | 259 | 5.00E-17 |
| Angiogenesis | PANTHER | 30 | 157 | 8.93E-17 |
| Signaling by NOTCH | Reactome | 26 | 108 | 1.30E-16 |
| Axon guidance | Reactome | 51 | 549 | 2.06E-16 |
| @@Axon guidance | KEGG PATHWAY | 23 | 176 | 2.29E-10 |
| Generic Transcription Pathway | Reactome | 62 | 822 | 5.20E-16 |
| Signalling by NGF | Reactome | 45 | 441 | 7.48E-16 |
| FoxO signaling pathway | KEGG PATHWAY | 27 | 134 | 1.09E-15 |
| Inflammation mediated by chemokine and cytokine signaling pathway | PANTHER | 31 | 202 | 3.91E-15 |
| Cytokine Signaling in Immune system | Reactome | 52 | 624 | 4.83E-15 |

表2 EMT基因富集的疾病

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| #Term | Database | Input number | Background number | Corrected P-Value |
| Cancers | KEGG DISEASE | 34 | 211 | 2.42E-16 |
| Skeletal diseases | KEGG DISEASE | 24 | 197 | 4.38E-09 |
| Musculoskeletal diseases | KEGG DISEASE | 26 | 268 | 4.16E-08 |
| Immune system diseases | KEGG DISEASE | 23 | 243 | 5.29E-07 |
| Inflammatory bowel disease | NHGRI GWAS Catalog | 24 | 271 | 5.65E-07 |
| Body mass index | NHGRI GWAS Catalog | 27 | 341 | 5.65E-07 |
| Cancers of eye, brain, and central nervous system | KEGG DISEASE | 9 | 27 | 2.00E-06 |
| Cancers of the lung and pleura | KEGG DISEASE | 8 | 22 | 6.18E-06 |
| Congenital disorders of development | KEGG DISEASE | 23 | 312 | 1.65E-05 |
| Cancers of haematopoietic and lymphoid tissues | KEGG DISEASE | 11 | 66 | 1.84E-05 |
| Allergies and autoimmune diseases | KEGG DISEASE | 12 | 85 | 2.43E-05 |
| Type 2 diabetes | NHGRI GWAS Catalog | 17 | 183 | 2.44E-05 |
| @@Type 1 diabetes | NHGRI GWAS Catalog | 5 | 69 | 0.076444 |
| @@Diabetes | KEGG DISEASE | 3 | 63 | 0.241047 |
| Other congenital disorders | KEGG DISEASE | 27 | 462 | 7.86E-05 |
| Cancers of the breast and female genital organs | KEGG DISEASE | 7 | 24 | 7.97E-05 |
| Cardiovascular diseases | KEGG DISEASE | 20 | 284 | 0.000114 |
| Height | NHGRI GWAS Catalog | 26 | 484 | 0.000408 |
| Non-small cell lung cancer | KEGG DISEASE | 5 | 12 | 0.00051 |
| Cancers of the urinary system and male genital organs | KEGG DISEASE | 7 | 37 | 0.000725 |

## 并集gene list分析（1229）：

表1 EMT基因富集通路

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| #Term | Database | Input number | Background number | Corrected P-Value |
| MicroRNAs in cancer | KEGG PATHWAY | 146 | 299 | 4.35E-119 |
| Signal Transduction | Reactome | 279 | 2448 | 2.17E-95 |
| Pathways in cancer | KEGG PATHWAY | 121 | 397 | 7.91E-79 |
| Developmental Biology | Reactome | 143 | 841 | 6.06E-65 |
| Proteoglycans in cancer | KEGG PATHWAY | 81 | 205 | 2.71E-59 |
| PI3K-Akt signaling pathway | KEGG PATHWAY | 78 | 342 | 2.66E-42 |
| Angiogenesis | PANTHER | 59 | 157 | 7.17E-42 |
| Immune System | Reactome | 153 | 1583 | 3.07E-41 |
| CCKR signaling map | PANTHER | 60 | 175 | 7.90E-41 |
| HTLV-I infection | KEGG PATHWAY | 66 | 259 | 2.58E-38 |
| Diseases of signal transduction | Reactome | 67 | 282 | 2.51E-37 |
| Chemokine signaling pathway | KEGG PATHWAY | 57 | 187 | 1.52E-36 |
| Focal adhesion | KEGG PATHWAY | 58 | 203 | 6.08E-36 |
| AGE-RAGE signaling pathway in diabetic complications | KEGG PATHWAY | 45 | 101 | 1.51E-34 |
| Innate Immune System | Reactome | 98 | 769 | 1.52E-34 |
| FoxO signaling pathway | KEGG PATHWAY | 49 | 134 | 1.80E-34 |
| Axon guidance | Reactome | 83 | 549 | 7.73E-34 |
| @@Axon guidance | KEGG PATHWAY | 46 | 176 | 2.45E-27 |
| Signaling pathways regulating pluripotency of stem cells | KEGG PATHWAY | 49 | 142 | 1.50E-33 |

表2 EMT基因富集通路

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| #Term | Database | Input number | Background number | Corrected P-Value |
| Cancers | KEGG DISEASE | 77 | 211 | 8.45E-54 |
| Skeletal diseases | KEGG DISEASE | 42 | 197 | 4.79E-21 |
| Cancers of the digestive system | KEGG DISEASE | 25 | 48 | 7.91E-20 |
| Musculoskeletal diseases | KEGG DISEASE | 44 | 268 | 1.82E-18 |
| Cancers of the breast and female genital organs | KEGG DISEASE | 19 | 24 | 1.48E-17 |
| Cancers of the urinary system and male genital organs | KEGG DISEASE | 21 | 37 | 2.21E-17 |
| Cancers of haematopoietic and lymphoid tissues | KEGG DISEASE | 22 | 66 | 1.91E-14 |
| Cancers of the lung and pleura | KEGG DISEASE | 16 | 22 | 1.91E-14 |
| Congenital disorders of development | KEGG DISEASE | 41 | 312 | 1.95E-14 |
| Inflammatory bowel disease | NHGRI GWAS Catalog | 37 | 271 | 1.72E-13 |
| Other congenital disorders | KEGG DISEASE | 48 | 462 | 1.93E-13 |
| Cancers of eye, brain, and central nervous system | KEGG DISEASE | 15 | 27 | 2.08E-12 |
| Gastric cancer | KEGG DISEASE | 13 | 20 | 2.24E-11 |
| @@Gastric cancer | NHGRI GWAS Catalog | 3 | 12 | 0.023928 |
| Immune system diseases | KEGG DISEASE | 32 | 243 | 2.28E-11 |
| Head and neck cancers | KEGG DISEASE | 13 | 23 | 7.30E-11 |
| Type 2 diabetes | NHGRI GWAS Catalog | 27 | 183 | 1.26E-10 |
| @@Diabetes | KEGG DISEASE | 7 | 63 | 0.00966 |
| @@Type 1 diabetes | NHGRI GWAS Catalog | 5 | 69 | 0.090647 |
| Body mass index | NHGRI GWAS Catalog | 36 | 341 | 2.45E-10 |