**S4 Table.** Gene annotation enrichment analysis of *ERG*s in human whole blood using DAVIDA (*p*<0.05).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Category**  *Subcategory* | **n**B | **KEGG Pathway** | **n** |  | **Molecular Function** | **n** |  | **Transcription**  **factor** | **n** |
| ***ERGs*** | 2335 | Cytokine-cytokine receptor interaction | 82 |  | Cytokine binding | 38 |  | IRF2 | 802 |
|  |  | NOD-like receptor signaling pathway | 30 |  | Cytokine activity | 54 |  | AP1 | 1138 |
|  |  | Chemokine signaling pathway | 59 |  | GTPase activator activity | 51 |  | AML1 | 1445 |
| *Below two-fold* | 1973 | Chemokine signaling pathway | 42 |  | GTPase regulator activity | 69 |  | ELK1 | 836 |
|  |  | Lysosome | 30 |  | Nucleoside-triphosphatase regulator activity | 70 |  | AP1 | 983 |
|  |  | Hematopoietic cell lineage | 22 |  | Cytokine binding | 27 |  | IRF2 | 688 |
| *Above two-fold* | 362 | Cytokine-cytokine receptor interaction | 40 |  | Cytokine activity | 34 |  | IRF1 | 77 |
|  |  | Toll-like receptor signaling pathway | 19 |  | Chemokine receptor binding | 15 |  | AP2α | 3 |
|  |  | NOD-like receptor signaling pathway | 13 |  | Chemokine activity | 14 |  | IRF2\* | 115 |
| *Reversible* C | 1892 | Cytokine-cytokine receptor interaction | 78 |  | Cytokine activity | 52 |  | IRF2 | 662 |
|  |  | Chemokine signaling pathway | 54 |  | Cytokine binding | 36 |  | AP1 | 941 |
|  |  | Toll-like receptor signaling pathway | 35 |  | Enzyme activator activity | 63 |  | AML1 | 1192 |
| *Augmentable* D | 105 | RIG-I-like receptor signaling pathway\* | 3 |  | Integrin binding\* | 3 |  | MAX | 25 |
|  |  | Fc gamma R-mediated phagocytosis\* | 3 |  | Protein deacetylase activity\* | 2 |  | TATA | 56 |
|  |  |  |  |  | Histone deacetylase activity\* | 2 |  | ARNT | 48 |
| *Independent* E | 338 | RIG-I-like receptor signaling pathway | 5 |  | Ligase activity, forming carbon-nitrogen bonds | 10 |  | EGR1 | 32 |
|  |  | NOD-like receptor signaling pathway | 4 |  | Enzyme binding | 15 |  | CREB | 122 |
|  |  | Endocytosis | 7 |  | Acid-amino acid ligase activity | 8 |  | AHR | 96 |

A According to DAVID Bioinformatics Resources 6.7 (http://david.abcc.ncifcrf.gov:8080/)

B n, number of associated *ERG*s (redundancy may occur); \* *p* < 0.1

C Reversed by at least one inhibitory strategy

D Not reversible at all

E Neither reversible or augmentable by any inhibitory strategy used in this study