**Table S1**. Gene-Ontology enrichment analysis.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Gene Set Name** | **Genes in**  **Gene Set (K)** | | **Genes in**  **Overlap (k)** | **k/K** | **p-value** | **FDR q-value** |
| IMMUNE SYSTEM PROCESS | 1984 | 266 | | 0.1341 | 1.24E-229 | 7.31E-226 |
| IMMUNE RESPONSE | 1100 | 199 | | 0.1809 | 2.13E-191 | 6.30E-188 |
| REGULATION OF IMMUNE SYSTEM PROCESS | 1403 | 208 | | 0.1483 | 4.24E-182 | 8.37E-179 |
| REGULATION OF IMMUNE RESPONSE | 858 | 159 | | 0.1853 | 1.24E-151 | 1.84E-148 |
| POSITIVE REGULATION OF IMMUNE SYSTEM PROCESS | 867 | 152 | | 0.1753 | 1.32E-140 | 1.56E-137 |
| DEFENSE RESPONSE | 1231 | 150 | | 0.1219 | 3.05E-114 | 3.01E-111 |
| LEUKOCYTE ACTIVATION | 414 | 105 | | 0.2536 | 1.58E-113 | 1.33E-110 |
| CELL ACTIVATION | 568 | 113 | | 0.1989 | 1.97E-109 | 1.46E-106 |
| REGULATION OF CELL ACTIVATION | 484 | 105 | | 0.2169 | 1.12E-105 | 7.39E-103 |
| LYMPHOCYTE ACTIVATION | 342 | 93 | | 0.2719 | 2.14E-103 | 1.27E-100 |