

**Table S6. Functional clusters overrepresented in genes regulated in C57BL/6 mice.**

| <b>Functional gene clusters overrepresented among genes up-regulated in C57BL/6 mice</b> | <b>Z Score</b> | <b>P-value</b> | <b>% of selection</b> | <b>% of all</b> |
|--|----------------|----------------|-----------------------|-----------------|
| <b>molecular function</b>  |                |                |                       |                 |
| chemokine activity   | 12.064         | <0.001         | 5.47                  | 0.37            |
| IgG binding  | 8.641          | <0.001         | 1.49                  | 0.06            |
| cytokine activity  | 8.004          | <0.001         | 9.45                  | 1.89            |
| receptor activity  | 4.574          | <0.001         | 19.90                 | 10.25           |
| signal transducer activity   | 6.95           | 0              | 36.8                  | 18.2            |
| hematopoietin/interferon-class (D200-domain) cytokine receptor activity                  | 3.657          | 0.007          | 2.49                  | 0.57            |
| interleukin receptor activity  | 3.377          | 0.022          | 1.49                  | 0.27            |
| hematopoietin/interferon-class (D200-domain) cytokine receptor binding                   | 2.926          | 0.02           | 1.49                  | 0.33            |
| hydrolase activity   | 2.015          | 0.045          | 19.9                  | 14.9            |
| <b>biological process</b>  |                |                |                       |                 |
| immune response  | 20.297         | <0.001         | 43.28                 | 7.08            |
| chemotaxis   | 15.939         | <0.001         | 13.43                 | 1.23            |
| humoral immune response  | 9.233          | <0.001         | 9.45                  | 1.54            |
| neutrophil chemotaxis  | 8.931          | <0.001         | 2.49                  | 0.14            |
| phagocytosis   | 8.879          | <0.001         | 3.48                  | 0.27            |
| antigen presentation   | 6.4            | <0.001         | 3.98                  | 0.59            |
| JAK-STAT cascade   | 6.338          | <0.001         | 2.99                  | 0.36            |
| cytokine production  | 5.72           | <0.001         | 4.48                  | 0.84            |
| myeloid cell differentiation   | 5.276          | <0.001         | 3.98                  | 0.77            |
| cytokine and chemokine mediated signaling pathway  | 5.138          | <0.001         | 2.49                  | 0.36            |
| keratinization   | 5.107          | 0.001          | 1.99                  | 0.24            |
| cell-mediated immune response  | 4.054          | 0.002          | 2.49                  | 0.50            |
| apoptosis  | 3.833          | 0.002          | 11.44                 | 5.41            |
| positive regulation of cytokine production   | 3.352          | 0.014          | 1.99                  | 0.44            |
| T-helper 1 type immune response  | 3.19           | 0.01           | 1.99                  | 0.47            |
| T cell activation  | 2.83           | 0.02           | 2.99                  | 1.01            |
| I-kappaB kinase/NF-kappaB cascade  | 2.419          | 0.03           | 2.49                  | 0.90            |