**Supplementary file 2. The KEGG enrichment pathways analysis of the lung transcriptome data and the primers of RT-qPCR.**

**Supplementary file 2a. The** **primary enrichment pathways of DEGs in KEGG analysis at classification level 1**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Classification\_level1 | Type | Gene\_number | Percentage | Gene |
| Organismal Systems | DEG | 3 | 6.98 | *Sema4d; Sirpb1c; Tnf* |
| Organismal Systems | DEG | 1 | 2.33 | *Hmox1* |
| Organismal Systems | DEG | 6 | 13.95 | *Ctsd; Nfkbie; Nos2; Slc26a4; Tnf; Trpm2* |
| Organismal Systems | DEG | 28 | 65.12 | *A2m; Ccl9; Cd14; Cd209a; Cd3e; Cd74; Cd80; Cfb; Clec4e; Cxcl1; Cxcl3; Cxcl5; Fcer2a; H2-M2; Icos; Il6; Lcn2; Marcksl1; Mefv; Naip2; Nfkbie; Nlrp1b; Nlrp3; Siglech; Sting1; Tbxas1; Tnf; Trpm2* |
| Organismal Systems | DEG | 3 | 6.98 | *Htr7; Nfkbie; Slc6a12* |
| Metabolism | DEG | 2 | 4.65 | *Arg1; Nos2* |
| Metabolism | DEG | 1 | 2.33 | *B4galnt4* |
| Metabolism | DEG | 2 | 4.65 | *Pla2g7; Tbxas1* |
| Metabolism | DEG | 1 | 2.33 | *Hmox1* |
| Human Diseases | DEG | 9 | 20.93 | *Bcl2a1b; Cd14; Cd3e; H2-M2; Hmox1; Il6; Nfkbie; Nos2; Tnf* |
| Human Diseases | DEG | 4 | 9.3 | *Bcl2a1b; Cd14; Hmox1; Nos2* |
| Human Diseases | DEG | 10 | 23.26 | *Cd14; Cd80; Ctsd; Cxcl1; Cxcl3; H2-M2; Hmox1; Il6; Nlrp3; Tnf* |
| Human Diseases | DEG | 2 | 4.65 | *Il6; Tnf* |
| Human Diseases | DEG | 4 | 9.3 | *Cd80; H2-M2; Il6; Tnf* |
| Human Diseases | DEG | 9 | 20.93 | *Cd3e; Cd80; Cxcl1; Cxcl3; Cxcl5; H2-M2; Icos; Il6; Tnf* |
| Human Diseases | DEG | 15 | 34.88 | *Cd14; Cd209a; Cd74; Cfb; Clec4e; Ctsd; Cxcl1; Cxcl3; Cxcl5; Il6; Mefv; Naip2; Nlrp3; Nos2; Tnf* |
| Human Diseases | DEG | 9 | 20.93 | *Arg1; Cd14; Cd3e; Cxcl1; Cxcl3; Il6; Marcksl1; Nos2; Tnf* |
| Human Diseases | DEG | 13 | 30.23 | *Cd209a; Cd3e; Cd74; Cfb; Cxcl1; Cxcl3; Fcer2a; H2-M2; Il6; Nfkbie; Nlrp3; Sting1; Tnf* |
| Human Diseases | DEG | 3 | 6.98 | *Il6; Nos2; Tnf* |
| Environmental Information Processing | DEG | 13 | 30.23 | *Bcl2a1b; Cd14; Ctsd; Cxcl1; Cxcl3; Cxcl5; Hmox1; Htr7; Il6; Inhba; Nos2; Timp1; Tnf* |
| Environmental Information Processing | DEG | 11 | 25.58 | *Ccl9; Cd80; Cxcl1; Cxcl3; Cxcl5; H2-M2; Htr7; Icos; Il6; Inhba; Tnf* |
| Cellular Processes | DEG | 8 | 18.6 | *Bcl2a1b; Ctsd; H2-M2; Hmox1; Il6; Nlrp3; Slc7a11; Tnf* |
| Cellular Processes | DEG | 1 | 2.33 | *Inhba* |
| Cellular Processes | DEG | 5 | 11.63 | *Cd14; Cd209a; Ctsd; H2-M2; Nos2* |

**Supplementary file 2b. The** **primary enrichment pathways of DEGs in KEGG analysis at classification level 2**

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| --- | --- | --- | --- |
| Term | Classification\_level2 | ListHits | geneID |
| Lipid and atherosclerosis | Cardiovascular disease | 6 | *Cd14;Cxcl1;Cxcl3;Il6;Nlrp3;Tnf* |
| Rheumatoid arthritis | Immune disease | 6 | *Cd80;Cxcl1;Cxcl3;Cxcl5;Il6;Tnf* |
| Graft-versus-host disease | Immune disease | 4 | *Cd80;H2-M2;Il6;Tnf* |
| NOD-like receptor signaling pathway | Immune system | 10 | *Cxcl1;Cxcl3;Il6;Mefv;Naip2;Nlrp1b;Nlrp3;Sting1;Tnf;Trpm2* |
| IL-17 signaling pathway | Immune system | 6 | *Cxcl1;Cxcl3;Cxcl5;Il6;Lcn2;Tnf* |
| Hematopoietic cell lineage | Immune system | 6 | *Cd14;Cd3e;Fcer2a;Il6;Siglech;Tnf* |
| C-type lectin receptor signaling pathway | Immune system | 5 | *Cd209a;Clec4e;Il6;Nlrp3;Tnf* |
| Intestinal immune network for IgA production | Immune system | 3 | *Cd80;Icos;Il6* |
| Toll-like receptor signaling pathway | Immune system | 4 | *Cd14;Cd80;Il6;Tnf* |
| T cell receptor signaling pathway | Immune system | 4 | *Cd3e;Icos;Nfkbie;Tnf* |
| Legionellosis | Infectious disease: bacterial | 6 | *Cd14;Cxcl1;Cxcl3;Il6;Naip2;Tnf* |
| Pertussis | Infectious disease: bacterial | 6 | *Cd14;Cxcl5;Il6;Nlrp3;Nos2;Tnf* |
| Tuberculosis | Infectious disease: bacterial | 8 | *Cd14;Cd209a;Cd74;Clec4e;Ctsd;Il6;Nos2;Tnf* |
| Amoebiasis | Infectious disease: parasitic | 7 | *Arg1;Cd14;Cxcl1;Cxcl3;Il6;Nos2;Tnf* |
| Chagas disease | Infectious disease: parasitic | 4 | *Cd3e;Il6;Nos2;Tnf* |
| Epstein-Barr virus infection | Infectious disease: viral | 6 | *Cd3e;Fcer2a;H2-M2;Il6;Nfkbie;Tnf* |
| NF-kappa B signaling pathway | Signal transduction | 5 | *Bcl2a1b;Cd14;Cxcl1;Cxcl3;Tnf* |
| TNF signaling pathway | Signal transduction | 5 | *Cxcl1;Cxcl3;Cxcl5;Il6;Tnf* |
| Viral protein interaction with cytokine and cytokine receptor | Signaling molecules and interaction | 6 | *Ccl9;Cxcl1;Cxcl3;Cxcl5;Il6;Tnf* |
| Cytokine-cytokine receptor interaction | Signaling molecules and interaction | 7 | *Ccl9;Cxcl1;Cxcl3;Cxcl5;Il6;Inhba;Tnf* |

**Supplementary file 2c. The primers of RT-qPCR**

|  |  |
| --- | --- |
| Amplified genes | Primer sequences (5' → 3') |
| *Cd74* | F: TAGACAAGCTGACCATCACCTCC |
|  | R: TGGGTCATGTTGCCGTACTTG |
| *Tnf* | F: CAAAATTCGAGTGACAAGCCTG |
|  | R: GAGATCCATGCCGTTGGC |
| *Lcn2* | F: TGGCCCTGAGTGTCATGTG |
|  | R: CTCTTGTAGCTCATAGATGGTGC |
| *Lrg1* | F: CAGATTCCTCATTCCCTCAG |
|  | R: CGTGTCAAAGCCAGATAAAC |
| *Ctsd* | F: GCTTCCGGTCTTTGACAACCT |
|  | R: CACCAAGCATTAGTTCTCCTCC |
| *Saa3* | F: AGAGAGGCTGTTCAGAAGTTCA |
|  | R: AGCAGGTCGGAAGTGGTTG |
| *Bpifa1* | F: TGCCTTTGGCTGTAAGCCC |
|  | R: AGAATTGCCTCCTCCAGACTTTA |
| *Scgb3a2* | F: ACTGCCCTTCTCATCAACCG |
|  | R: CAGTCCTGTCACCAGATGTTC |
| *Nos2* | F: GGAGCGAGTTGTGGATTGTC |
|  | R: TGAGGGCTTGGCTGAGTGAG |
| *Defb1* | F: ACTCTCTGCTTACTTTTGTCTG |
|  | R: GGTGCCTTGAATTTTGGT |
| *β-actin* | F: GCTTCTAGGCGGACTGTTACT |
| (animal) | R: GCCTTCACCGTTCCAGTTTTT |
| *β-actin* | F：GTCCACCGCAAATGCTTCTA |
| (human) | R：TGCTGTCACCTTCACCGTTC |