**Supplementary File 6. Pathway analysis for genes upregulated only in EC\_cluster4**

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| --- | --- | --- |
| Zfp36 | MAPK cascade | 0.00250583 |
| phosphatidylinositol 3-kinase/protein kinase B signal transduction | 0.002647933 |
| cellular response to tumor necrosis factor | 0.003156035 |
| p38MAPK cascade | 0.003670272 |
| obsolete phosphatidylinositol 3-kinase signaling | 0.012327772 |
| cellular response to glucocorticoid stimulus | 0.018962001 |
| ERK1 and ERK2 cascade | 0.018962001 |
| cellular response to fibroblast growth factor stimulus | 0.019159141 |
| cellular response to epidermal growth factor stimulus | 0.026707055 |
| negative regulation of interleukin-2 production | 0.032454936 |
| vasculogenesis | 0.034405213 |
| cellular response to cAMP | 0.034405213 |
| cell population proliferation | 0.04027658 |
| heat shock protein binding | 1.46638E-08 |
| C-C chemokine binding | 0.002647933 |
| Hsp90aa1 | positive regulation of nitric oxide biosynthetic process | 0.021649389 |
| extracellular matrix | 0.003517823 |
| membrane | 0.026630135 |
| nitric-oxide synthase regulator activity | 0.032454936 |
| Cited2 | positive regulation of cell-cell adhesion | 0.009649989 |
| vasculogenesis | 0.034405213 |
| Itgb2 | neutrophil chemotaxis | 0.003517823 |
| positive regulation of nitric oxide biosynthetic process | 0.021649389 |
| membrane raft | 0.004504895 |
| membrane | 0.026630135 |
| heat shock protein binding | 1.46638E-08 |
| ICAM-3 receptor activity | 0.026630135 |
| Tlr3 | positive regulation of inflammatory response | 2.64486E-05 |
| positive regulation of interleukin-6 production | 0.003125083 |
| positive regulation of interleukin-12 production | 0.01041014 |
| cellular response to type II interferon | 0.013764808 |
| positive regulation of type III interferon production | 0.018962001 |
| microglial cell activation involved in immune response | 0.032454936 |
| MyD88-independent toll-like receptor signaling pathway | 0.035660924 |
| positive regulation of toll-like receptor signaling pathway | 0.035660924 |
| positive regulation of interferon-alpha production | 0.035660924 |
| positive regulation of chemokine production | 0.043224513 |
| positive regulation of interferon-beta production | 0.047220479 |
| Ptges3 | glucocorticoid receptor signaling pathway | 0.039296238 |
| cell population proliferation | 0.04027658 |
| Hexb | astrocyte cell migration | 0.003125083 |
| glycosaminoglycan metabolic process | 0.039296238 |
| intracellular calcium ion homeostasis | 0.039721568 |
| membrane | 0.026630135 |
| extracellular space | 0.043224513 |
| Id2 | Peyer's patch development | 0.043224513 |
| Dynll1 | microtubule | 0.019159141 |
| membrane | 0.026630135 |
| Igf1 | phosphatidylinositol 3-kinase/protein kinase B signal transduction | 0.002647933 |
| obsolete phosphatidylinositol 3-kinase signaling | 0.012327772 |
| ERK1 and ERK2 cascade | 0.018962001 |
| positive regulation of cell migration | 0.035660924 |
| regulation of nitric oxide biosynthetic process | 0.035660924 |
| positive regulation of phosphatidylinositol 3-kinase/protein kinase B signal transduction | 0.039721568 |
| cell population proliferation | 0.04027658 |
| positive regulation of glycolytic process | 0.049977366 |
| response to epidermal growth factor | 0.049977366 |
| positive regulation of calcineurin-NFAT signaling cascade | 0.049977366 |
| extracellular space | 0.043224513 |
| Ppt1 | positive regulation of pinocytosis | 0.032454936 |
| pinocytosis | 0.035660924 |
| membrane raft | 0.004504895 |
| membrane | 0.026630135 |
| extracellular space | 0.043224513 |
| St13 | heat shock protein binding | 1.46638E-08 |
| Hsp70 protein binding | 0.003156035 |
| Ccr5 | positive regulation of inflammatory response | 2.64486E-05 |
| MAPK cascade | 0.00250583 |
| release of sequestered calcium ion into cytosol by sarcoplasmic reticulum | 0.002647933 |
| chemokine-mediated signaling pathway | 0.002988252 |
| positive regulation of interleukin-6 production | 0.003125083 |
| positive regulation of cell-cell adhesion | 0.009649989 |
| positive regulation of interleukin-1 beta production | 0.017952523 |
| G protein-coupled receptor signaling pathway | 0.021046863 |
| calcium-mediated signaling | 0.022698002 |
| calcium ion transport | 0.040380395 |
| positive regulation of cytosolic calcium ion concentration | 0.047220479 |
| C-C chemokine binding | 0.002647933 |
| chemokine (C-C motif) ligand 5 binding | 0.026630135 |
| C-C chemokine receptor activity | 0.049977366 |