

Supplemental Table IV: Canonical pathways arranged in descending order of significance

Ingenuity Canonical Pathways	-log(p-value)	# of genes up-regulated	# of genes down-regulated	Total # of genes
Hepatic Fibrosis / Hepatic Stellate Cell Activation	11.70	43	2	155
Granulocyte Adhesion and Diapedesis	9.67	43	1	182
Crosstalk between Dendritic Cells and Natural Killer Cells	9.60	27	1	106
Communication between Innate and Adaptive Immune Cells	9.56	27	0	112
Dendritic Cell Maturation	9.45	42	2	211
TREM1 Signaling	8.27	19	3	75
Graft-versus-Host Disease Signaling	8.13	18	0	51
T Helper Cell Differentiation	8.00	24	0	72
Altered T Cell and B Cell Signaling in Rheumatoid Arthritis	7.79	26	1	100
Allograft Rejection Signaling	7.02	17	0	97
Pathogenesis of Multiple Sclerosis	6.69	7	0	10
B Cell Development	5.86	12	0	36
Agranulocyte Adhesion and Diapedesis	5.86	37	1	192
Role of Macrophages, Fibroblasts and Endothelial Cells in Rheumatoid Arthritis	5.84	52	6	342
Atherosclerosis Signaling	5.80	28	2	139
Antigen Presentation Pathway	5.79	13	0	42
Colorectal Cancer Metastasis Signaling	5.68	42	7	268
Autoimmune Thyroid Disease Signaling	5.57	14	0	62
Role of Pattern Recognition Receptors in Recognition of Bacteria and Viruses	5.01	23	2	109
Role of Hypercytokinemia/hyperchemokine in the Pathogenesis of Influenza	4.94	12	0	46
Type I Diabetes Mellitus Signaling	4.71	25	1	121
Inhibition of Matrix Metalloproteases	4.61	13	0	40
Differential Regulation of Cytokine Production in Intestinal Epithelial Cells by IL-17A and IL-17F	4.58	9	0	23
Complement System	4.52	10	1	35
Differential Regulation of Cytokine Production in Macrophages and T Helper Cells by IL-17A and IL-17F	4.15	8	0	18
Role of Osteoblasts, Osteoclasts and Chondrocytes in Rheumatoid Arthritis	3.95	35	7	250
Aryl Hydrocarbon Receptor Signaling	3.78	22	7	171
IL-10 Signaling	3.76	17	1	78
LXR/RXR Activation	3.60	22	3	139
Airway Pathology in Chronic Obstructive Pulmonary Disease	3.54	5	0	11
Cytotoxic T Lymphocyte-mediated Apoptosis of Target Cells	3.49	13	0	88
IL-12 Signaling and Production in Macrophages	3.34	21	4	157
Acute Phase Response Signaling	3.19	25	7	181
CCR5 Signaling in Macrophages	3.12	14	2	97
Natural Killer Cell Signaling	3.10	18	3	118
IL-8 Signaling	2.95	29	4	225
Cell Cycle Control of Chromosomal Replication	2.88	1	8	34
CD28 Signaling in T Helper Cells	2.83	19	4	136

Role of NFAT in Regulation of the Immune Response	2.75	26	4	200
Pancreatic Adenocarcinoma Signaling	2.69	16	6	128
Hematopoiesis from Pluripotent Stem Cells	2.62	9	0	63
Production of Nitric Oxide and Reactive Oxygen Species in Macrophages	2.61	25	6	212
IL-6 Signaling	2.61	20	3	124
Leukocyte Extravasation Signaling	2.57	32	1	210
Interferon Signaling	2.50	9	0	36
OX40 Signaling Pathway	2.37	11	1	97
IL-15 Production	2.37	6	2	31
Tec Kinase Signaling	2.29	22	5	184
Calcium-induced T Lymphocyte Apoptosis	2.29	10	3	71
Bladder Cancer Signaling	2.23	14	3	97
Systemic Lupus Erythematosus Signaling	2.09	24	4	256
Role of PKR in Interferon Induction and Antiviral Response	2.07	8	2	49
Nur77 Signaling in T Lymphocytes	2.06	10	1	64
NF-B Signaling	2.06	22	6	181
Role of Cytokines in Mediating Communication between Immune Cells	2.01	9	0	55
Role of Tissue Factor in Cancer	1.97	16	4	130
Apoptosis Signaling	1.96	14	3	100
Fcy Receptor-mediated Phagocytosis in Macrophages and Monocytes	1.94	14	4	106
Ovarian Cancer Signaling	1.92	14	9	152
Role of IL-17A in Psoriasis	1.92	4	0	14
Coagulation System	1.92	8	1	38
Estrogen-mediated S-phase Entry	1.89	2	5	28
Macropinocytosis Signaling	1.86	12	2	77
HER-2 Signaling in Breast Cancer	1.84	11	4	82
Acute Myeloid Leukemia Signaling	1.79	8	7	84
Activation of IRF by Cytosolic Pattern Recognition Receptors	1.79	10	1	74
LPS/IL-1 Mediated Inhibition of RXR Function	1.64	30	1	245
Glioma Signaling	1.63	9	8	113
Intrinsic Prothrombin Activation Pathway	1.61	6	1	37
Eicosanoid Signaling	1.58	12	0	86
Role of CHK Proteins in Cell Cycle Checkpoint Control	1.54	3	8	59
IL-17A Signaling in Fibroblasts	1.53	7	1	40
TNFR2 Signaling	1.53	6	1	34
Role of BRCA1 in DNA Damage Response	1.53	4	8	71
Ephrin Receptor Signaling	1.52	25	2	210
fMLP Signaling in Neutrophils	1.51	15	3	132
Melatonin Degradation II	1.47	2	0	12
VDR/RXR Activation	1.46	12	2	88
IL-17A Signaling in Gastric Cells	1.45	6	0	28
iNOS Signaling	1.42	7	2	53
Axonal Guidance Signaling	1.42	50	7	487
IL-22 Signaling	1.37	4	2	25
PKC δ Signaling in T Lymphocytes	1.37	15	3	144
Human Embryonic Stem Cell Pluripotency	1.34	16	5	162
Primary Immunodeficiency Signaling	1.33	7	1	64
Chemokine Signaling	1.33	10	2	75
Choline Biosynthesis III	1.32	4	0	22

Proliferation-related pathways (shaded in grey) show more down-regulated than up-regulated genes.