Enriched Pathways

Pathway Name	Resource Identifier	Adjusted p-value	Genes Mapped	Pathway Size
Metabolism	R-HSA-1430728	0.0	17	2095
Immune System	R-HSA-168256	0.0	16	2050
Metabolism of proteins	R-HSA-392499	0.0	14	2048
Innate Immune System	R-HSA-168249	0.0	11	1109
Neutrophil degranulation	R-HSA-6798695	0.0	10	479
Metabolism of RNA	R-HSA-8953854	0.0	10	666
Disease	R-HSA-1643685	0.0007	8	1048
Axon guidance	R-HSA-422475	0.0002	7	553
Developmental Biology	R-HSA-1266738	0.0027	7	1045
Post-translational protein modification	R-HSA-597592	0.008	7	1354
Signaling by ROBO receptors	R-HSA-376176	0.0	6	218
Translation	R-HSA-72766	0.0001	6	294
Metabolism of amino acids and derivatives	R-HSA-71291	0.0002	6	370
Infectious disease	R-HSA-5663205	0.0002	6	381
Cytokine Signaling in Immune system	R-HSA-1280215	0.0022	6	677
Influenza Life Cycle	R-HSA-168255	0.0	5	144
Influenza Infection	R-HSA-168254	0.0001	5	155
Processing of Capped Intron-Containing Pre-mRNA	R-HSA-72203	0.0003	5	240
Signaling by Interleukins	R-HSA-449147	0.0024	5	451
Activation of the mRNA upon binding of the cap-binding complex and eIFs, and subsequent binding to 43S	R-HSA-72662	0.0	4	60
Translation initiation complex formation	R-HSA-72649	0.0	4	59
Ribosomal scanning and start codon recognition	R-HSA-72702	0.0	4	59
Cap-dependent Translation Initiation	R-HSA-72737	0.0003	4	120
Eukaryotic Translation Initiation	R-HSA-72613	0.0003	4	120
L13a-mediated translational silencing of Ceruloplasmin expression	R-HSA-156827	0.0003	4	112
Selenoamino acid metabolism	R-HSA-2408522	0.0003	4	118
GTP hydrolysis and joining of the 60S ribosomal subunit	R-HSA-72706	0.0003	4	113
Influenza Viral RNA Transcription and Replication	R-HSA-168273	0.0005	4	135
Regulation of expression of SLITs and ROBOs	R-HSA-9010553	0.0011	4	172
mRNA Splicing - Major Pathway	R-HSA-72163	0.0013	4	180
Major pathway of rRNA processing in the nucleolus and cytosol	R-HSA-6791226	0.0013	4	183
mRNA Splicing	R-HSA-72172	0.0014	4	188
rRNA processing in the nucleus and cytosol	R-HSA-8868773	0.0014	4	193
rRNA processing	R-HSA-72312	0.0016	4	203
Metabolism of carbohydrates	R-HSA-71387	0.0033	4	274
Cellular responses to stress	R-HSA-2262752	0.0091	4	398
Cellular responses to external stimuli	R-HSA-8953897	0.0158	4	475
Hemostasis	R-HSA-109582	0.0351	4	675
Formation of the ternary complex, and subsequently, the 43S complex	R-HSA-72695	0.0007	3	52
Glycolysis	R-HSA-70171	0.0014	3	71

Pathway Name	Resource Identifier	Adjusted p-value	Genes Mapped	Pathway Size
Glucose metabolism	R-HSA-70326	0.0023	3	91
Viral mRNA Translation	R-HSA-192823	0.0023	3	90
Peptide chain elongation	R-HSA-156902	0.0023	3	90
Eukaryotic Translation Termination	R-HSA-72764	0.0024	3	94
Selenocysteine synthesis	R-HSA-2408557	0.0024	3	94
Nonsense Mediated Decay (NMD) independent of the Exon Junction Complex (EJC)	R-HSA-975956	0.0024	3	96
Eukaryotic Translation Elongation	R-HSA-156842	0.0024	3	95
Interleukin-1 signaling	R-HSA-9020702	0.0027	3	103
Formation of a pool of free 40S subunits	R-HSA-72689	0.0027	3	102
SUMO E3 ligases SUMOylate target proteins	R-HSA-3108232	0.0033	3	113
SRP-dependent cotranslational protein targeting to membrane	R-HSA-1799339	0.0033	3	113
Nonsense-Mediated Decay (NMD)	R-HSA-927802	0.0034	3	116
Nonsense Mediated Decay (NMD) enhanced by the Exon Junction Complex (EJC)	R-HSA-975957	0.0034	3	116
SUMOylation	R-HSA-2990846	0.0036	3	119
Platelet degranulation	R-HSA-114608	0.0043	3	128
Response to elevated platelet cytosolic Ca2+	R-HSA-76005	0.0046	3	133
Interleukin-1 family signaling	R-HSA-446652	0.005	3	139
Apoptosis	R-HSA-109581	0.0079	3	168
Programmed Cell Death	R-HSA-5357801	0.008	3	171
Platelet activation, signaling and aggregation	R-HSA-76002	0.0206	3	261
Diseases of signal transduction	R-HSA-5663202	0.0383	3	374
DEx/H-box helicases activate type I IFN and inflammatory cytokines production	R-HSA-3134963	0.0016	2	13
Scavenging by Class A Receptors	R-HSA-3000480	0.0026	2	19
RIP-mediated NFkB activation via ZBP1	R-HSA-1810476	0.0033	2	23
Cytosolic tRNA aminoacylation	R-HSA-379716	0.0034	2	24
TRAF6 mediated NF-kB activation	R-HSA-933542	0.0039	2	26
ZBP1(DAI) mediated induction of type I IFNs	R-HSA-1606322	0.0041	2	27
Gluconeogenesis	R-HSA-70263	0.0057	2	34
TAK1 activates NFkB by phosphorylation and activation of IKKs complex	R-HSA-445989	0.0057	2	34
Gene and protein expression by JAK-STAT signaling after Interleukin-12 stimulation	R-HSA-8950505	0.007	2	38
tRNA Aminoacylation	R-HSA-379724	0.008	2	42
Interleukin-12 signaling	R-HSA-9020591	0.0096	2	47
Regulation of Apoptosis	R-HSA-169911	0.0121	2	53
Interleukin-12 family signaling	R-HSA-447115	0.0138	2	57
rRNA modification in the nucleus and cytosol	R-HSA-6790901	0.0145	2	60
Cytosolic sensors of pathogen-associated DNA	R-HSA-1834949	0.0176	2	68
Assembly of the pre-replicative complex	R-HSA-68867	0.0176	2	68
Regulation of HSF1-mediated heat shock response	R-HSA-3371453	0.0182	2	70
Orc1 removal from chromatin	R-HSA-68949	0.0185	2	71
SUMOylation of DNA damage response and repair proteins	R-HSA-3108214	0.0203	2	76
MyD88 cascade initiated on plasma membrane	R-HSA-975871	0.023	2	85

Pathway Name	Resource Identifier	Adjusted p-value	Genes Mapped	Pathway Size
Toll Like Receptor 10 (TLR10) Cascade	R-HSA-168142	0.023	2	85
DDX58/IFIH1-mediated induction of interferon-alpha/beta	R-HSA-168928	0.023	2	82
Toll Like Receptor 5 (TLR5) Cascade	R-HSA-168176	0.023	2	85
ER-Phagosome pathway	R-HSA-1236974	0.023	2	84
DNA Replication Pre-Initiation	R-HSA-69002	0.023	2	85
Metabolism of polyamines	R-HSA-351202	0.023	2	85
M/G1 Transition	R-HSA-68874	0.023	2	85
Switching of origins to a post-replicative state	R-HSA-69052	0.025	2	90
Cellular response to heat stress	R-HSA-3371556	0.025	2	90
TRAF6 mediated induction of NFkB and MAP kinases upon TLR7/8 or 9 activation	R-HSA-975138	0.0257	2	92
MyD88:Mal cascade initiated on plasma membrane	R-HSA-166058	0.0262	2	95
MyD88 dependent cascade initiated on endosome	R-HSA-975155	0.0262	2	94
Toll Like Receptor 7/8 (TLR7/8) Cascade	R-HSA-168181	0.0262	2	94
Toll Like Receptor TLR6:TLR2 Cascade	R-HSA-168188	0.0262	2	95
Toll Like Receptor 2 (TLR2) Cascade	R-HSA-181438	0.0271	2	98
Toll Like Receptor TLR1:TLR2 Cascade	R-HSA-168179	0.0271	2	98
Toll Like Receptor 9 (TLR9) Cascade	R-HSA-168138	0.0271	2	98
Toll Like Receptor 3 (TLR3) Cascade	R-HSA-168164	0.0273	2	99
MyD88-independent TLR4 cascade	R-HSA-166166	0.0273	2	100
TRIF(TICAM1)-mediated TLR4 signaling	R-HSA-937061	0.0273	2	100
Antigen processing-Cross presentation	R-HSA-1236975	0.0273	2	100
Binding and Uptake of Ligands by Scavenger Receptors	R-HSA-2173782	0.0276	2	101
Metabolism of nucleotides	R-HSA-15869	0.0279	2	102
Synthesis of DNA	R-HSA-69239	0.0351	2	119
TCR signaling	R-HSA-202403	0.0364	2	124
DNA Replication	R-HSA-69306	0.0378	2	127
Toll Like Receptor 4 (TLR4) Cascade	R-HSA-166016	0.0385	2	129
Host Interactions of HIV factors	R-HSA-162909	0.0385	2	130
G1/S Transition	R-HSA-69206	0.0385	2	130
Mitotic G1-G1/S phases	R-HSA-453279	0.0467	2	148
G2/M Checkpoints	R-HSA-69481	0.0471	2	151
Toll-Like Receptors Cascades	R-HSA-168898	0.0482	2	155
S Phase	R-HSA-69242	0.05	2	160
Virus Assembly and Release	R-HSA-168268	0.0145	1	2
Assembly of Viral Components at the Budding Site	R-HSA-168316	0.0145	1	2
SUMOylation of transcription cofactors	R-HSA-3899300	0.0191	1	3
Scavenging by Class F Receptors	R-HSA-3000484	0.0288	1	6
Erythrocytes take up oxygen and release carbon dioxide	R-HSA-1247673	0.0351	1	8
POLB-Dependent Long Patch Base Excision Repair	R-HSA-110362	0.0351	1	8
ChREBP activates metabolic gene expression	R-HSA-163765	0.0351	1	8
Role of ABL in ROBO-SLIT signaling	R-HSA-428890	0.0351	1	8
HDR through MMEJ (alt-NHEJ)	R-HSA-5685939	0.041	1	10
ATF6 (ATF6-alpha) activates chaperone genes	R-HSA-381183	0.041	1	10

Pathway Name	Resource Identifier	Adjusted p-value	Genes Mapped	Pathway Size
Creatine metabolism	R-HSA-71288	0.041	1	10
Folding of actin by CCT/TriC	R-HSA-390450	0.041	1	10
SeMet incorporation into proteins	R-HSA-2408517	0.0445	1	11
O2/CO2 exchange in erythrocytes	R-HSA-1480926	0.0467	1	12
Erythrocytes take up carbon dioxide and release oxygen	R-HSA-1237044	0.0467	1	12
Reversible hydration of carbon dioxide	R-HSA-1475029	0.0467	1	12
ATF6 (ATF6-alpha) activates chaperones	R-HSA-381033	0.0467	1	12
Unwinding of DNA	R-HSA-176974	0.0467	1	12
Purine salvage	R-HSA-74217	0.0482	1	13
Activation of DNA fragmentation factor	R-HSA-211227	0.0482	1	13
Advanced glycosylation endproduct receptor signaling	R-HSA-879415	0.0482	1	13
Apoptosis induced DNA fragmentation	R-HSA-140342	0.0482	1	13
Dissolution of Fibrin Clot	R-HSA-75205	0.0482	1	13