

Biological Processes	Subprocess	Sub-subprocess	Sub-Sub-subprocess	# genes	Percent of gene hit against total # genes	Percent of gene hit against total # Pathway hits
metabolic process				114	49.40%	24.90%
	biosynthetic process (GO:0009058)			8	7.00%	4.80%
	nitrogen compound metabolic process (GO:0006807)			15	13.20%	9.10%
	phosphate-containing compound metabolic process (GO:0006796)			24	21.10%	14.50%
	generation of precursor metabolites and energy (GO:0006091)			2	1.80%	1.20%
	catabolic process (GO:0009056)			12	10.50%	7.30%
	sulfur compound metabolic process (GO:0006790)			1	0.90%	0.60%
	primary metabolic process (GO:0044238)			103	90.40%	62.40%
		nucleobase-containing compound metabolic process		26	25.20%	23.90%
		lipid metabolic process (GO:0006629)		8	7.80%	7.30%
		cellular amino acid metabolic process (GO:0006520)		1	1.00%	0.90%
		carbohydrate metabolic process (GO:0005975)		3	2.90%	2.80%
		protein metabolic process (GO:0019538)		71	68.90%	65.10%
			proteolysis (GO:0006508)	36	50.70%	52.20%
			translation (GO:0006412)	1	1.40%	1.40%
			protein complex assembly (GO:0006461)	1	1.40%	1.40%
			protein folding (GO:0006457)	7	9.90%	10.10%
			cellular protein modification process (GO:0006464)	24	33.80%	34.80%
cellular process				95	41.10%	20.70%
	cellular component movement (GO:0006928)			8	8.40%	10.30%
	cytokinesis (GO:0000910)			2	2.10%	2.60%
	cell cycle (GO:0007049)			21	22.10%	26.90%
	chromosome segregation (GO:0007059)			1	1.10%	1.30%
	cell proliferation (GO:0008283)			3	3.20%	3.80%
	cell communication (GO:0007154)			43	45.30%	55.10%
response to stimulus				61	26.40%	13.30%
	response to biotic stimulus (GO:0009607)			2	3.30%	3.60%
	response to external stimulus (GO:0009605)			12	19.70%	21.40%
	response to stress (GO:0006950)			22	36.10%	39.30%
	behavior (GO:0007610)			1	1.60%	1.80%
	cellular defense response (GO:0006968)			8	13.10%	14.30%
	immune response (GO:0006955)			10	16.40%	17.90%
	defense response to bacterium (GO:0042742)			1	1.60%	1.80%
immune system process				44	19.00%	9.60%
	macrophage activation (GO:0042116)			6	13.60%	25.00%
	antigen processing and presentation (GO:0019882)			8	18.20%	33.30%
	immune response (GO:0006955)			10	22.70%	41.70%
localization				37	16.00%	8.10%
biological regulation				34	14.70%	7.40%
developmental process				19	8.20%	4.10%

cellular component organization or biogenesis				17	7.40%	3.70%
biological adhesion				14	6.10%	3.10%
multicellular organismal process				13	5.60%	2.80%
apoptotic process				5	2.20%	1.10%
reproduction				3	1.30%	0.70%
locomotion				2	0.90%	0.40%

Molecular Function	# genes	Percent of gene hit against total # genes	Percent of gene hit against total # Pathway hits
catalytic activity (GO:0003824)	86	37.20%	39.60%
binding (GO:0005488)	62	26.80%	28.60%
receptor activity (GO:0004872)	18	7.80%	8.30%
transporter activity (GO:0005215)	16	6.90%	7.40%
enzyme regulator activity (GO:0030234)	14	6.10%	6.50%
structural molecule activity (GO:0005198)	14	6.10%	6.50%
nucleic acid binding transcription factor activity (GO:0001071)	4	1.70%	1.80%
translation regulator activity (GO:0045182)	1	0.40%	0.50%
protein binding transcription factor activity (GO:0009888)	1	0.40%	0.50%
antioxidant activity (GO:0016209)	1	0.40%	0.50%

Protein Class	# genes	Percent of gene hit against total # genes	Percent of gene hit against total # Pathway hits
hydrolase (PC00121)	33	14.30%	11.40%
signaling molecule (PC00207)	24	10.40%	8.30%
enzyme modulator (PC00095)	23	10.00%	8.00%
defense/immunity protein (PC00090)	22	9.50%	7.60%
transferase (PC00220)	19	8.20%	6.60%
receptor (PC00197)	19	8.20%	6.60%
protease (PC00190)	17	7.40%	5.90%
nucleic acid binding (PC00171)	15	6.50%	5.20%
cell adhesion molecule (PC00069)	14	6.10%	4.80%
calcium-binding protein (PC00060)	13	5.60%	4.50%
kinase (PC00137)	13	5.60%	4.50%
transporter (PC00227)	12	5.20%	4.20%
cytoskeletal protein (PC00085)	11	4.80%	3.80%
membrane traffic protein (PC00150)	8	3.50%	2.80%
extracellular matrix protein (PC00102)	7	3.00%	2.40%
transfer/carrier protein (PC00219)	7	3.00%	2.40%
transcription factor (PC00218)	7	3.00%	2.40%
isomerase (PC00135)	5	2.20%	1.70%
oxidoreductase (PC00176)	4	1.70%	1.40%
chaperone (PC00072)	4	1.70%	1.40%
ligase (PC00142)	2	0.90%	0.70%
phosphatase (PC00181)	2	0.90%	0.70%
surfactant (PC00212)	2	0.90%	0.70%
storage protein (PC00210)	2	0.90%	0.70%
transmembrane receptor regulatory/adaptor protein (PC00226)	1	0.40%	0.30%
lyase (PC00144)	1	0.40%	0.30%
cell junction protein (PC00070)	1	0.40%	0.30%
structural protein (PC00211)	1	0.40%	0.30%

Pathway	# genes	Percent of gene hit against total # genes	Percent of gene hit against total # Pathway hits
Integrin signalling pathway (P00034)	16	6.90%	5.10%
Inflammation mediated by chemokine and cytokine signaling pathway (P00031)	15	6.50%	4.80%
Ubiquitin proteasome pathway (P00060)	15	6.50%	4.80%
CCKR signaling map (P06959)	15	6.50%	4.80%
Angiogenesis (P00005)	14	6.10%	4.50%
Parkinson disease (P00049)	13	5.60%	4.10%
T cell activation (P00053)	12	5.20%	3.80%
FGF signaling pathway (P00021)	12	5.20%	3.80%
EGF receptor signaling pathway (P00018)	11	4.80%	3.50%
Gonadotropin releasing hormone receptor pathway (P06664)	11	4.80%	3.50%
VEGF signaling pathway (P00056)	10	4.30%	3.20%
Ras Pathway (P04393)	10	4.30%	3.20%
PDGF signaling pathway (P00047)	10	4.30%	3.20%
B cell activation (P00010)	10	4.30%	3.20%
Cell cycle (P00013)	8	3.50%	2.50%
Apoptosis signaling pathway (P00006)	7	3.00%	2.20%
Toll receptor signaling pathway (P00054)	7	3.00%	2.20%
Cytoskeletal regulation by Rho GTPase (P00016)	7	3.00%	2.20%
Axon guidance mediated by netrin (P00009)	6	2.60%	1.90%
Interleukin signaling pathway (P00036)	6	2.60%	1.90%
Endothelin signaling pathway (P00019)	6	2.60%	1.90%
Alzheimer disease-amyloid secretase pathway (P00003)	5	2.20%	1.60%
Insulin/IGF pathway-mitogen activated protein kinase kinase/MAP kinase cascade (P00032)	5	2.20%	1.60%
TGF-beta signaling pathway (P00052)	5	2.20%	1.60%
SHT2 type receptor mediated signaling pathway (P04374)	4	1.70%	1.30%
Hypoxia response via HIF activation (P00030)	4	1.70%	1.30%
p53 pathway feedback loops 2 (P04398)	4	1.70%	1.30%
Wnt signaling pathway (P00057)	4	1.70%	1.30%
Thyrotropin-releasing hormone receptor signaling pathway (P04394)	4	1.70%	1.30%
Oxytocin receptor mediated signaling pathway (P04391)	4	1.70%	1.30%
Histamine H1 receptor mediated signaling pathway (P04385)	4	1.70%	1.30%
Axon guidance mediated by semaphorins (P00007)	3	1.30%	1.00%
Interferon-gamma signaling pathway (P00035)	3	1.30%	1.00%
p53 pathway (P00059)	3	1.30%	1.00%
Adenine and hypoxanthine salvage pathway (P02723)	3	1.30%	1.00%
PI3 kinase pathway (P00048)	3	1.30%	1.00%

Blood coagulation (P00011)	3	1.30%	1.00%
Angiotensin II-stimulated signaling through G proteins and beta-arrestin (P05911)	3	1.30%	1.00%
Axon guidance mediated by Slit/Robo (P00008)	2	0.90%	0.60%
Alzheimer disease-presenilin pathway (P00004)	2	0.90%	0.60%
Huntington disease (P00029)	2	0.90%	0.60%
Heterotrimeric G-protein signaling pathway-Gq alpha and Go alpha mediated pathway (P00027)	2	0.90%	0.60%
Glycolysis (P00024)	2	0.90%	0.60%
Xanthine and guanine salvage pathway (P02788)	2	0.90%	0.60%
p38 MAPK pathway (P05918)	2	0.90%	0.60%
Oxidative stress response (P00046)	2	0.90%	0.60%
Muscarinic acetylcholine receptor 1 and 3 signaling pathway (P00042)	2	0.90%	0.60%
De novo purine biosynthesis (P02738)	1	0.40%	0.30%
Purine metabolism (P02769)	1	0.40%	0.30%
Alpha adrenergic receptor signaling pathway (P00002)	1	0.40%	0.30%
Insulin/IGF pathway-protein kinase B signaling cascade (P00033)	1	0.40%	0.30%
Pentose phosphate pathway (P02762)	1	0.40%	0.30%
p53 pathway by glucose deprivation (P04397)	1	0.40%	0.30%
Plasminogen activating cascade (P00050)	1	0.40%	0.30%
Lysine biosynthesis (P02751)	1	0.40%	0.30%
Nicotinic acetylcholine receptor signaling pathway (P00044)	1	0.40%	0.30%
Cadherin signaling pathway (P00012)	1	0.40%	0.30%
Metabotropic glutamate receptor group I pathway (P00041)	1	0.40%	0.30%