



15/21 developmental cell growth
29/43 cell growth
23/38 post-embryonic development
6/10 lung epithelial cell differentiation
17/21 establishment of spindle localization
9/18 camera-type eye development
45/77 brain development
47/81 rhythmic process
13/33 regulation of cycle process
83/147 regulation of cell projection organization
6/8 negative regulation of axon extension
13/23 regulation of extent of cell growth
37/67 regulation of developmental growth
97/76 regulation of neurogenesis
23/45 regulation of dendrite development
162/278 regulation of cell development
41/76 positive regulation of cell projection organization
20/32 regulation of chemotaxis
30/46 regulation of behavior
13/23 chemotaxis
255/457 cellular component movement
32/42 neuron migration
130/228 cell motility
161/285 locomotion
13/16 axonal fasciculation
6/10 nerve development
5/6 cranial nerve development
168/309 system development
97/187 nervous system development
266/437 response to endogenous stimulus
49/81 **response to fibroblast growth factor**
48/87 response to growth factor
144/262 enzyme linked receptor protein signaling pathway
505/960 cell surface receptor signaling pathway
8/13 ephrin receptor signaling pathway
35/64 protein autoubiquitination
61/104 response to peptide
63/112 peptidyl-tyrosine phosphorylation
279/510 phosphorylation
45/85 protein autophosphorylation
41/59 neuron development
253/429 regulation of cell differentiation
10/27 positive regulation of myeloid cell differentiation
370/631 regulation of developmental process
166/273 positive regulation of developmental process
8/12 regulation of osteoblast proliferation
43/69 regulation of ossification
31/50 regulation of osteoblast differentiation
31/47 ossification
49/78 regulation of canonical Wnt signaling pathway
66/112 regulation of Wnt signaling pathway
7/9 establishment of planar polarity of embryonic epithelium
74/177 Wnt signaling pathway
16/23 inner ear receptor stereocilium organization
191/358 cell projection organization
14/20 negative regulation of transforming growth factor beta receptor signaling pathway
199/359 negative regulation of response to stimulus
8/23 negative regulation of cellular response to growth factor stimulus
19/29 convergent extension
131/236 embryonic morphogenesis
80/141 tissue morphogenesis
28/46 embryonic heart tube morphogenesis
10/13 regulation of planar cell polarity pathway involved in neural tube closure
37/65 organ morphogenesis
18/29 cardiac septum development
21/37 maintenance of organ identity
27/51 specification of symmetry
257/440 organ development
44/72 kidney development
25/46 lung development
32/69 cilium morphogenesis
19/36 photoreceptor cell maintenance
15/25 epithelial cilium movement
21/38 cilium movement
80/153 microtubule-based movement
10/17 epithelial cilium movement involved in determination of left/right asymmetry
44/71 establishment or maintenance of cell polarity
29/45 regulation of embryonic development
22/45 skeletal system morphogenesis
108/189 organ morphogenesis
328/576 anatomical structure morphogenesis
13/23 epithelial to mesenchymal transition
9/10 neural crest formation
133/249 cellular component morphogenesis
249/450 regulation of transcription from RNA polymerase II promoter
191/801 regulation of transcription from RNA polymerase II promoter
140/253 positive regulation of transcription from RNA polymerase II promoter
328/580 negative regulation of metabolic process
12/17 negative regulation of gene expression, epigenetic
240/441 negative regulation of biosynthetic process
191/353 negative regulation of nitrogen compound metabolic process
5/9 negative regulation of cell differentiation
59/106 negative regulation of phosphate metabolic process
222/395 regulation of cell proliferation
128/216 positive regulation of cell proliferation
7/8 positive regulation of cardiac muscle cell proliferation
29/45 regulation of muscle organ development
27/49 morphogenesis of a branching structure
5/8 pericardium morphogenesis
11/15 morphogenesis of an epithelial sheet
316/597 multicellular organismal development
52/900 regulation of cell communication
6/9 heart valve morphogenesis
105/183 pattern specification process
61/103 regionalization
32/54 anterior/posterior pattern specification
13/25 embryonic pattern specification
49/93 neuron differentiation
6/11 neural tube formation
9/16 epithelial tube formation
26/54 tube formation
11/15 execution phase of apoptosis
27/46 muscle tissue development
108/186 tissue development
247/459 regulation of cell death
39/65 regulation of I-kappaB kinase/NF-kappaB signaling
67/111 regulation of sequence-specific DNA binding transcription factor
4/5 positive regulation of CREB transcription factor
38/67 positive regulation of sequence-specific DNA binding transcription factor
14/24 immune response-activating cell surface receptor signaling pathway
47/79 immune response-regulating signaling pathway
119/212 regulation of immune system process
21/41 immune response-regulating cell surface receptor signaling pathway
66/121 regulation of immune response
5/5 interleukin-1-mediated signaling pathway
7/8 Toll signaling pathway
59/107 positive regulation of immune system process
43/77 positive regulation of immune response
9/14 regulation of interferon-beta production
28/49 positive regulation of defense response
280/469 positive regulation of response to stimulus
10/17 regulation of leukocyte mediated immunity
27/45 regulation of immune effector process
68/103 regulation of binding
48/74 regulation of protein binding
313/559 positive regulation of molecular function
32/47 positive regulation of binding
510/902 regulation of molecular function
14/23 regulation of lipase
139/65 positive regulation of MAP kinase
92/146 positive regulation of MAPK cascade
150/245 positive regulation of intracellular signal transduction
442/753 regulation of protein metabolic process
61/97 activation of protein kinase
118/185 positive regulation of transferase
18/25 regulation of NIK/NF-kappaB signaling
127/209 positive regulation of protein phosphorylation
484/806 positive regulation of metabolic process
212/326 positive regulation of protein metabolic process
62/97 positive regulation of protein serine/threonine kinase
218/359 regulation of protein phosphorylation
54/94 regulation of MAP kinase
102/165 regulation of protein serine/threonine kinase
23/33 positive regulation of stress-activated protein kinase signaling cascade
34/81 positive regulation of stress-activated protein kinase signaling cascade
142/232 regulation of MAPK cascade
271/464 regulation of intracellular signal transduction
33/59 tube development
16/23 respiratory tube development
170/297 regulation of response to stress
4/5 macroautophagy
94/156 regulation of cellular response to stress
41/63 leukocyte differentiation
9/10 mature B cell differentiation
386/684 cell differentiation
20/41 T cell activation
6/7 mature B cell differentiation involved in immune response
50/96 immune effector process
173/291 defense response
7/9 lymphocyte mediated immunity
81/3 leukocyte mediated immunity
10/10 positive regulation of cytokine biosynthetic process
9/14 regulation of cytokine biosynthetic process
128/221 immune response
9/14 adaptive immune response
5/6 T-helper type immune response
97/169 positive regulation of multicellular organismal process
30/44 positive regulation of cytokine production
61/105 synaptic transmission
146/237 cell communication
4/7 synaptic transmission, cholinergic
99/168 single organism signaling
22/22 response to nicotine
143/232 response to nitrogen compound
31/45 response to alkaloid
21/33 negative regulation of cytokine production
68/40 regulation of cytokine production
10/13 negative regulation of tumor necrosis factor production
415/727 regulation of multicellular organismal process
15/18 regulation of tumor necrosis factor production
9/10 regulation of interleukin-6 production
21/31 positive regulation of angiogenesis
8/13 regulation of NF-kappaB import into nucleus
68/111 regulation of intracellular transport
143/245 regulation of cellular localization
29/61 regulation of nucleocytoplasmic transport
33/76 negative regulation of transport
6/8 negative regulation of endocytosis
25/37 reactive oxygen species metabolic process
10/16 superoxide metabolic process
550/932 response to chemical
6/9 response to superoxide
10/13 cellular response to amino acid stimulus
8/10 actin-mediated cell contraction
4/6 actin-myosin filament sliding
49/81 embryo development ending in birth or egg hatching
5/8 activation of adenylate cyclase
156/291 regulation of nucleotide metabolic process
387/680 regulation of phosphorus metabolic process
44/73 regulation of cyclic nucleotide metabolic process
19/34 regulation of cyclase
8/16 positive regulation of lyase
28/51 regulation of nucleotide biosynthetic process
17/27 positive regulation of nucleotide metabolic process
34/81 positive regulation of biosynthetic process
9/19 regulation of vasodilation
9/15 regulation of cAMP-dependent protein kinase
71/113 neuropeptide signaling pathway
38/73 regulation of Ras protein signal transduction
23/41 regulation of Rho protein signal transduction
53/99 regulation of small GTPase mediated signal transduction
37/67 regulation of Rho GTPase
9/14 phospholipase C-activating G-protein coupled receptor signaling pathway
186/324 G-protein coupled receptor signaling pathway
81/9 adrenergic receptor signaling pathway
19/40 regulation of heart contraction
13/18 regulation of heart rate
6/8 positive regulation of heart rate
56/109 regulation of system process
6/12 positive regulation of heart contraction
10/15 regulation of striated muscle contraction
13/22 regulation of smooth muscle contraction
28/48 regulation of muscle system process
6/10 positive regulation of smooth muscle contraction
6/11 reflex
6/10 adult heart development
48/90 heart development
12/18 positive regulation of synaptic transmission
60/101 regulation of synaptic transmission
5/6 regulation of action potential
5/6 positive regulation of tissue remodeling
12/15 regulation of tissue remodeling
62/88 regulation of homeostatic process
95/162 ion homeostasis
48/80 divalent inorganic cation homeostasis
125/214 chemical homeostasis
77/114 cellular chemical homeostasis
22/33 cytosolic calcium ion homeostasis
8/10 blood circulation
29/45 circulatory system process
23/43 muscle system process
231/388 system process
54/81 sensory perception of light stimulus
112/184 sensory perception
175/289 neurological system process
38/63 sensory perception of mechanical stimulus
84/138 single-organism behavior
24/41 adult behavior
4/6 behavioral response to ethanol
35/56 locomotory behavior
120/201 behavior
12/20 associative learning
56/92 cognition
52/80 response to alcohol
19/30 response to ethanol
185/304 metal ion transport
36/72 sodium ion transport
23/43 sodium ion transmembrane transport
265/43 cation transport
445/740 transmembrane transport
51/78 potassium ion transport
124/203 monovalent inorganic cation transport
14/61 ATP hydrolysis coupled proton transport
46/51 hydrogen transport
336/393 ion transmembrane transport
61/2 membrane depolarization during action potential
77/111 regulation of transmembrane transport
351/605 regulation of localization
4/5 regulation of acetylcholine secretion, neurotransmission
108/160 regulation of ion transport
255/433 regulation of transport
19/37 membrane depolarization
5/10 neuronal action potential
11/19 action potential
49/78 regulation of membrane potential
7/15 response to pain
21/21 multicellular organismal response to stress
71/102 calcium ion transmembrane transport
95/146 divalent inorganic cation transport
14/30 detection of chemical stimulus
64/110 detection of stimulus
14/10 detection of chemical stimulus involved in sensory perception
16/36 detection of stimulus involved in sensory perception
30/55 detection of mechanical stimulus
238/404 response to abiotic stimulus
278/472 response to external stimulus
7/8 mechanosensory behavior
58/101 response to mechanical stimulus
26/43 modification of morphology or physiology of other organism
20/24 cell killing
90/151 multi-organism cellular process
10/12 pathogenesis
67/15 negative regulation of protein modification process
312/509 regulation of phosphorylation
10/11 regulation of ubiquitin-protein ligase involved in mitotic cell cycle
116/203 negative regulation of protein metabolic process
9/14 negative regulation of ligase
18/23 regulation of ligase
51/72 positive regulation of cell cycle process
15/21 positive regulation of cell cycle arrest
21/34 antigen processing and presentation
13/17 antigen processing and presentation of peptide antigen via MHC class I
59/7 proteasomal protein catabolic process
427/679 proteolysis
14/22 ER-associated ubiquitin-dependent protein catabolic process
77/130 protein catabolic process
11/12 anaphase-promoting complex-dependent proteasomal ubiquitin-depender
114/188 proteolysis involved in cellular protein catabolic process
260/461 protein ubiquitination by small protein conjugation or removal
61/103 protein polyubiquitination
26/50 protein ubiquitination involved in ubiquitin-dependent protein catabolic process
5/6 regulation of DNA-dependent DNA replication initiation
12/14 DNA replication initiation
268/454 cell cycle
55/85 mitotic cell cycle
52/81 DNA conformation change
7/7 DNA unwinding involved in DNA replication
6/8 DNA replication checkpoint
38/54 meiotic nuclear division
183/269 organelle fission
10/14 piRNA metabolic process
4/5 protein localization to kinetochore
6/7 spindle checkpoint
32/48 chromosome segregation
27/3 regulation of nuclear division
39/60 cell-cell adhesion
29/43 homophilic cell adhesion
6/9 calcium-dependent cell-cell adhesion
28/51 peptidyl-tyrosine dephosphorylation
43/84 protein dephosphorylation
73/193 protein folding
28/38 peptidyl-proline modification
14/16 chaperone-mediated protein folding
6/7 de novo posttranslational protein folding
22/31 peptidyl-asparagine modification
265/64 peptidyl-amino acid modification
24/44 protein N-linked glycosylation
5/8 COPII vesicle coating
29/49 post-translational protein modification
8/10 cell-cell recognition
12/17 intracellular protein transmembrane transport
150/249 intracellular protein transport
339/593 establishment of protein localization
21/36 mitochondrial transport
110/194 membrane organization
156/242 cellular macromolecular complex assembly
16/22 cytoskeletal macromolecular assembly
7/11 mRNA splice site selection
38/55 protein-DNA complex subunit organization
27/37 protein-DNA complex assembly
12/18 chromatin assembly or disassembly
47/90 peptidyl-lysine modification
90/159 covalent chromatin modification
6/12 transcription from RNA polymerase I promoter
465/873 RNA biosynthetic process
11/226 ncRNA metabolic process
33/73 rRNA metabolic process
202/396 RNA processing
145/210 translation
12/15 formation of translation preinitiation complex
34/53 translational initiation
18/23 translational elongation
22/32 multicellular organismal metabolic process
61/100 cellular component disassembly
5/7 actin nucleation
42/71 regulation of protein polymerization
4/5 cobalamin metabolic process
32/35 digestion
68/152 carbohydrate derivative biosynthetic process
32/57 glycosyl compound biosynthetic process
30/45 nucleoside monophosphate biosynthetic process
63/104 nucleoside phosphate biosynthetic process
317/513 single-organism biosynthetic process
91/4 biosynthetic process
268/466 carbohydrate derivative catabolic process
22/29 nucleobase metabolic process
16/21 purine nucleobase metabolic process
316/541 nucleobase-containing small molecule metabolic process
4/6 nucleobase metabolic process
21/34 pigment metabolic process
268/509 intracellular signal transduction
23/39 second-messenger-mediated signaling
6/8 intrinsic apoptotic signaling pathway in response to endoplasmic reticulum stress
7/12 CPM metabolic process
14/20 cyclic nucleotide metabolic process
10/10 L-serine metabolic process
171/261 cellular amino acid metabolic process
5/6 L-serine biosynthetic process
70/104 cellular amino acid biosynthetic process
146/226 small molecule biosynthetic process
30/44 aspartate family amino acid metabolic process
173/278 organonitrogen compound biosynthetic process
7/8 pteridine-containing compound biosynthetic process
243/7 cellular modified amino acid biosynthetic process
65/10 cellular modified amino acid metabolic process
11/18 glutathione metabolic process
36/56 peptide metabolic process
54/84 cellular amide metabolic process
404/679 single-organism catabolic process
14/21 homocarboxylic acid catabolic process
171/146 small molecule catabolic process
32/55 cellular lipid catabolic process
527/894 cellular catabolic process
21/29 nuclear-transcribed mRNA catabolic process, nonsense-mediated decay
5/7 anthranilate metabolic process
19/14 aromatic amino acid family catabolic process
303/509 organonitrogen compound catabolic process
52/80 cellular amino acid catabolic process
5/6 tryptophan catabolic process to kynurenine
9/11 tryptophan catabolic process
119/181 alpha-amino acid metabolic process
10/14 benzene-containing compound metabolic process
294/490 lipid metabolic process
18/24 diterpenoid metabolic process
199/335 cellular lipid metabolic process
23/24 cellular hormone metabolic process
436/644 oxidation-reduction process
17/21 primary alcohol metabolic process
6/12 prostanoic acid metabolic process
80/136 fatty acid metabolic process
18/28 pyruvate metabolic process
324/501 organic acid metabolic process
153/220 monocarboxylic acid metabolic process
45/77 sulfur compound biosynthetic process
91/150 sulfur compound metabolic process
4/6 acetyl-CoA biosynthetic process
8/12 acetyl-CoA metabolic process
15/29 thioester metabolic process
78/136 cofactor metabolic process
41/57 dicarboxylic acid metabolic process
23/32 tricarboxylic acid cycle
15/21 cellular aldehyde metabolic process
21/29 cellular polysaccharide metabolic process
37/16 cellular carbohydrate metabolic process
241/394 carbohydrate metabolic process
23/29 polysaccharide catabolic process
36/49 polysaccharide metabolic process
26/38 carbohydrate biosynthetic process
9/17 oligosaccharide metabolic process
14/21 amino sugar catabolic process
29/44 amino sugar metabolic process
20/30 chitin metabolic process
41/67 aminoglycan metabolic process
557/78 organophosphate metabolic process
30/49 single-organism carbohydrate catabolic process
49/74 carbohydrate catabolic process
33/50 glucose metabolic process
59/87 monosaccharide metabolic process
8/10 pentose-phosphate shunt
175/239 inorganic-carbohydrate catabolic process
8/11 pentose metabolic process
20/29 pyridine-containing compound metabolic process
7/8 NAD metabolic process
10/16 NADP metabolic process
21/34 oxidoreductin coenzyme metabolic process
32/46 cell redox homeostasis
17/31 chloride transport
89/165 anion transport
26/43 inorganic anion transport
8/16 neutral amino acid transport
5/5 plasminogen activation
11/19 negative regulation of coagulation
8/8 regulation of fibrinolysis
86/119 DNA integration
86/149 RNA-dependent DNA replication

p < 0.01
p < 0.05
p < 0.1