

Names	total	elements		
Acute F Acute M Protract F Protract M	1	non-membrane-bounded organelle assembly		
Acute F Acute M Protract M	23	negative regulation of cellular component organization		
		DNA metabolic process		
		dendrite development		
		cell cycle process		
		cytoskeleton organization		
		regulation of microtubule cytoskeleton organization		
		regulation of supramolecular fiber organization		
		regulation of DNA metabolic process		
		regulation of cytoskeleton organization		
		regulation of cellular component biogenesis		
		organelle assembly		
		regulation of organelle assembly		
		regulation of protein-containing complex assembly		
		mitotic cell cycle		
		mitotic cell cycle process		
		positive regulation of cellular component organization		
		regulation of organelle organization		
		protein localization to organelle		
		microtubule-based process		
		positive regulation of organelle organization		
		regulation of protein polymerization		
		microtubule cytoskeleton organization		
		neurogenesis		
Acute F Acute M Protract F	26	peptide biosynthetic process		
		regulation of transport		
		ribosomal small subunit biogenesis		
		membrane organization		
		rRNA processing		
		amide biosynthetic process		
		ribosome biogenesis		
		establishment of protein localization		
		negative regulation of protein metabolic process		
		vesicle docking involved in exocytosis		
		ncRNA metabolic process		
		cytoplasmic translation		
		organonitrogen compound biosynthetic process		
		protein transport		
		translation		
		vesicle-mediated transport		
		peptide metabolic process		
		vesicle tethering involved in exocytosis		
		intracellular transport		
		intracellular protein transport		
		cellular component disassembly		
		translation at postsynapse		
		rRNA metabolic process		

			translation at presynapse
			amide metabolic process
			translation at synapse
Acute M Protract M	14		regulation of microtubule polymerization
			regulation of synaptic plasticity
			positive regulation of cell cycle process
			protein-DNA complex organization
			chromatin remodeling
			microtubule polymerization
			postsynaptic density organization
			chromatin organization
			regulation of microtubule-based process
			nucleosome organization
			protein polymerization
			postsynaptic specialization organization
			growth
			positive regulation of synaptic transmission
Acute F Protract M	3		regulation of microtubule polymerization or depolymerization
			chromosome organization
			microtubule polymerization or depolymerization
Acute M Protract F	6		vesicle-mediated transport in synapse
			vesicle docking
			regulation of mitochondrion organization
			membrane docking
			organelle localization by membrane tethering
			endomembrane system organization
Acute F Protract F	4		membrane fission
			ncRNA processing
			ribosomal large subunit biogenesis
			organelle disassembly
Acute F Acute M	150		lamellipodium organization
			regulation of locomotion
			maturation of SSU-rRNA
			regulation of synapse structure or activity
			supramolecular fiber organization
			cellular response to peptide hormone stimulus
			regulation of translation
			response to oxidative stress
			cell junction organization
			response to xenobiotic stimulus
			cell morphogenesis
			cell cycle
			actin filament-based process
			dendritic spine development
			actin filament organization
			regulation of cell motility
			cytoskeleton-dependent cytokinesis
			neuron differentiation

protein localization to nucleus
protein localization to membrane
neuron development
regulation of GTPase activity
regulation of apoptotic signaling pathway
small molecule metabolic process
negative regulation of molecular function
organelle localization
regulation of transmembrane transport
positive regulation of transport
maintenance of protein localization in organelle
regulation of protein transport
positive regulation of protein depolymerization
ribosome assembly
positive regulation of protein metabolic process
macromolecule catabolic process
plasma membrane bounded cell projection organization
cell part morphogenesis
generation of precursor metabolites and energy
regulation of chromosome organization
regulation of vesicle-mediated transport
regulation of plasma membrane bounded cell projection

assembly

positive regulation of programmed cell death
regulation of establishment of protein localization
plasma membrane bounded cell projection morphogenesis
locomotion
neuron cellular homeostasis
protein phosphorylation
generation of neurons
positive regulation of catabolic process
import into cell
cellular catabolic process
cell projection organization
regulation of plasma membrane bounded cell projection

organization

positive regulation of DNA metabolic process
response to inorganic substance
postsynapse organization
cellular homeostasis
actin cytoskeleton organization
positive regulation of apoptotic process
organic acid metabolic process
cellular nitrogen compound catabolic process
positive regulation of cell projection organization
regulation of amide metabolic process
response to reactive oxygen species
neuron projection development
negative regulation of protein localization to nucleus
negative regulation of microtubule polymerization or

depolymerization

- regulation of catalytic activity
- regulation of intracellular signal transduction
- regulation of actin filament length
- regulation of anatomical structure morphogenesis
- response to toxic substance
- synaptic signaling
- cell-cell signaling
- cellular response to nitrogen compound
- mitochondrion organization
- phosphorylation
- cell motility
- actin polymerization or depolymerization
- positive regulation of signaling
- cell projection morphogenesis
- regulation of cell morphogenesis
- regulation of cell projection organization
- regulation of proteolysis
- negative regulation of protein polymerization
- exocytic process
- endocytosis
- dendrite morphogenesis
- positive regulation of actin filament depolymerization
- positive regulation of cell communication
- positive regulation of plasma membrane bounded cell

projection assembly

- regulation of actin polymerization or depolymerization
- regulation of cell migration
- regulation of protein localization
- regulation of cellular localization
- regulation of transferase activity
- regulation of endocytosis
- dendritic spine morphogenesis
- positive regulation of molecular function
- regulation of programmed cell death
- regulation of actin cytoskeleton organization
- negative regulation of organelle organization
- cell migration
- response to organic cyclic compound
- positive regulation of locomotion
- negative regulation of cytoskeleton organization
- neuron projection morphogenesis
- regulation of actin filament organization
- regulation of synapse organization
- response to corticosteroid
- mitotic cytokinesis
- regulation of neuron projection development
- ribosomal small subunit assembly
- positive regulation of catalytic activity
- regulation of actin filament polymerization

	oxoacid metabolic process cellular response to peptide positive regulation of cell motility small GTPase mediated signal transduction regulation of dendrite morphogenesis regulation of cell projection assembly cell morphogenesis involved in neuron differentiation positive regulation of lamellipodium organization maintenance of protein location in cell regulation of dendrite development regulation of actin filament-based process central nervous system development establishment of organelle localization lamellipodium assembly negative regulation of protein-containing complex
assembly	regulation of monoatomic ion transmembrane transport vesicle targeting regulation of protein modification process carboxylic acid metabolic process synapse organization regulation of catabolic process regulation of cellular response to stress positive regulation of cell migration regulation of protein binding protein-containing complex disassembly vesicle tethering cellular response to organonitrogen compound cellular component morphogenesis transmembrane transport positive regulation of protein localization response to hydrogen peroxide regulation of apoptotic process negative regulation of supramolecular fiber
organization	localization within membrane regulation of anatomical structure size cellular response to oxygen-containing compound
Protract M	96 mRNA export from nucleus regulation of histone H3-K9 methylation nucleosome assembly luteolysis negative regulation of DNA recombination negative regulation of DNA-templated transcription DNA modification regulation of spindle assembly positive regulation of chromosome organization mitotic spindle organization positive regulation of DNA methylation regulation of locomotion involved in locomotory

behavior

developmental process involved in reproduction
monoamine transport
endoplasmic reticulum tubular network formation
negative regulation of gene expression, epigenetic
regulation of mitotic cell cycle phase transition
negative regulation of cell growth
regulation of membrane hyperpolarization
negative regulation of DNA metabolic process
response to heat
RNA export from nucleus
positive regulation of mitotic cell cycle phase

transition

protein-DNA complex assembly
histone H3-K9 methylation
positive regulation of microtubule polymerization or

depolymerization

negative regulation of growth
anterograde neuronal dense core vesicle transport
positive regulation of cell cycle
Roundabout signaling pathway
trans-synaptic signaling by BDNF
negative regulation of bicellular tight junction

assembly

microtubule cytoskeleton organization involved in

mitosis

negative regulation of filopodium assembly
peptidyl-lysine trimethylation
DNA methylation
negative regulation of nucleobase-containing compound

metabolic process

negative regulation of RNA biosynthetic process
histone methylation
negative regulation of gene expression
regulation of DNA recombination
regulation of spindle organization
epigenetic regulation of gene expression
macromolecule methylation
T cell proliferation involved in immune response
heterochromatin organization
negative regulation of transcription by RNA polymerase

II

catecholamine transport
erythrocyte development
regulation of mitotic spindle assembly
histone H3-K27 trimethylation
pointed-end actin filament capping
retrograde neuronal dense core vesicle transport
regulation of vesicle transport along microtubule
negative regulation of chromosome organization

	mitotic cell cycle phase transition
	regulation of mitotic spindle organization
	regulation of cytotoxic T cell differentiation
	regulation of cell cycle process
	microtubule nucleation
	protein methylation
	DNA alkylation
	catecholamine secretion
	negative regulation of RNA metabolic process
	methylation
	histone H3-K4 methylation
	cell cycle phase transition
	mitotic spindle assembly
	positive regulation of microtubule nucleation
	peptidyl-lysine methylation
	DNA recombination
	histone lysine methylation
	peptidyl-lysine modification
	regulation of dense core granule transport
	positive regulation of protein polymerization
	histone modification
	proprioception
	heterochromatin formation
	spindle organization
	myeloid cell development
	developmental growth involved in morphogenesis
	protein alkylation
	negative regulation of dendrite extension
	response to cortisol
	positive regulation of microtubule polymerization
	histone H3-K4 trimethylation
	regulation of primary miRNA processing
	cytotoxic T cell differentiation
	chromosome condensation
replication	positive regulation of nuclear cell cycle DNA
microtubule	positive regulation of vesicle transport along
	development of primary sexual characteristics
	long-term synaptic potentiation
	gonad development
	regulation of microtubule nucleation
	histone H3-K27 methylation
Protract F	15 amyloid-beta metabolic process
	NLS-bearing protein import into nucleus
	regulation of amyloid precursor protein catabolic
process	amyloid precursor protein catabolic process
	mitochondrial translational elongation
	positive regulation of synaptic vesicle recycling

- regulation of Golgi organization
 - regulation of autophagy of mitochondrion
 - positive regulation of glucocorticoid receptor
- signaling pathway
 - regulation of glucocorticoid receptor signaling
- pathway
 - corticosteroid receptor signaling pathway
 - ubiquitin recycling
 - positive regulation of intracellular steroid hormone
- receptor signaling pathway
 - glucocorticoid receptor signaling pathway
 - ribonucleoprotein complex biogenesis
- Acute M 629
 - head development
 - negative regulation of transcription of nucleolar
- large rRNA by RNA polymerase I
 - negative regulation of nuclear-transcribed mRNA
- catabolic process, deadenylation-dependent decay
 - regulation of arginase activity
 - postsynaptic specialization assembly
 - response to yeast
 - regulation of biological quality
 - energy derivation by oxidation of organic compounds
 - regulation of long-term neuronal synaptic plasticity
 - muscle cell differentiation
 - synaptic transmission, glutamatergic
 - response to monoamine
 - regulation of neurotransmitter receptor localization
- to postsynaptic specialization membrane
 - positive regulation of Schwann cell migration
 - DNA damage response
 - cytosolic transport
 - regulation of neuronal synaptic plasticity
 - negative regulation of synaptic transmission
 - vagus nerve morphogenesis
 - positive regulation of secretion by cell
 - pyramidal neuron differentiation
 - regulation of nucleobase-containing compound transport
 - positive regulation of metabolic process
 - regulation of macromolecule metabolic process
 - cellular component assembly involved in morphogenesis
 - intracellular monoatomic cation homeostasis
 - acetylcholine-mediated vasodilation involved in
- regulation of systemic arterial blood pressure
 - DNA repair
 - response to type II interferon
 - positive regulation of translation
 - olefin metabolic process
 - positive regulation of lamellipodium assembly
 - calcium-mediated signaling
 - response to nicotine

	peptide secretion
	maintenance of postsynaptic specialization structure
	neuron projection organization
	intermediate filament bundle assembly
	regulation of NMDA receptor activity
	positive regulation of cell differentiation
	purine ribonucleotide biosynthetic process
	establishment of protein localization to extracellular
region	
receptor levels	regulation of postsynaptic membrane neurotransmitter
	DNA-templated viral transcription
	protein localization to cell periphery
	establishment of localization in cell
	multicellular organismal process
	regulation of presynaptic membrane potential
	ligand-gated ion channel signaling pathway
	regulation of action potential firing pattern
	cellular response to chemical stimulus
	viral translation
	regulation of nervous system development
	intracellular chemical homeostasis
	receptor-mediated endocytosis
	regulation of sister chromatid cohesion
	protein localization to postsynaptic specialization
membrane	
	response to antibiotic
	regulation of system process
	response to arsenic-containing substance
	positive regulation of sister chromatid cohesion
	cytokinesis
	regulation of biological process
	pyruvate metabolic process
	regulation of aspartic-type peptidase activity
	calcium ion transmembrane transport
	activation of GTPase activity
	reactive nitrogen species metabolic process
	protein trimerization
	positive regulation of smooth muscle cell
differentiation	
	response to fungicide
	regulation of lamellipodium assembly
	establishment of vesicle localization
	maintenance of protein location
	positive regulation of establishment of cell polarity
regulating cell	shape
	behavior
	calmodulin dependent kinase signaling pathway
	cell differentiation
	regulation of hydrolase activity

- mRNA destabilization
- cell division
- response to abiotic stimulus
- positive regulation of leukocyte chemotaxis
- cellular component organization or biogenesis
- peripheral nervous system development
- response to stimulus
- regulation of RNA export from nucleus
- homeostasis of number of cells
- cellular response to cytokine stimulus
- positive regulation of response to stimulus
- regulation of SUMO transferase activity
- clathrin-dependent endocytosis
- regulation of oxidative stress-induced intrinsic apoptotic signaling pathway
- regulation of protein metabolic process
- regulation of postsynaptic density assembly
- alternative mRNA splicing, via spliceosome
- sarcomere organization
- protein localization to extracellular region
- modulation of excitatory postsynaptic potential
- postsynaptic neurotransmitter receptor internalization
- protein secretion
- cellular alkene metabolic process
- developmental process
- positive regulation of vesicle fusion
- positive regulation of gliogenesis
- amyloid-beta clearance by transcytosis
- regulation of secretion
- cell population proliferation
- neurotransmitter secretion
- organophosphate metabolic process
- system development
- vesicle transport along microtubule
- inorganic cation transmembrane transport
- macromolecule localization
- protein localization to postsynapse
- positive regulation of cell development
- positive regulation of synaptic vesicle membrane organization
- dendritic spine maintenance
- synchronous neurotransmitter secretion
- dendritic transport of messenger ribonucleoprotein complex
- establishment or maintenance of cell polarity
- cellular response to reactive nitrogen species
- spike train
- cellular response to stimulus
- glial cell differentiation
- localization

	cognition positive regulation of cell population proliferation neurofilament cytoskeleton organization regulation of organic acid transport intracellular glucose homeostasis multicellular organism development muscle cell development regulation of endoplasmic reticulum tubular network
organization	oligodendrocyte differentiation response to ischemia regulation of peptide hormone secretion suckling behavior myelination establishment of cell polarity cellular macromolecule localization learning or memory positive regulation of nitric oxide biosynthetic
process	regulation of postsynaptic density organization morphogenesis of follicular epithelium dendritic transport axon ensheathment organelle organization negative regulation of cellular process nucleosome disassembly muscle structure development amide transport positive regulation of cytoplasmic translation regulation of neuron apoptotic process cell junction assembly learning regulation of Schwann cell migration positive regulation of protein localization to
membrane	locomotory behavior regulation of chromosome segregation chemical synaptic transmission, postsynaptic regulation of developmental process positive regulation of glial cell migration response to dexamethasone locomotory exploration behavior positive regulation of oligodendrocyte differentiation actomyosin structure organization regulation of synaptic vesicle membrane organization anterograde synaptic vesicle transport response to other organism pyridoxal 5'-phosphate salvage regulation of synaptic vesicle fusion to presynaptic
active zone membrane	

glutamine family amino acid biosynthetic process
 positive regulation of peptide secretion
 regulation of presynaptic cytosolic calcium ion
 concentration
 nervous system development
 phosphatidylinositol-3-phosphate biosynthetic process
 maintenance of synapse structure
 regulation of cytoplasmic translation
 regulation of myelination
 positive regulation of endoplasmic reticulum tubular
 network organization
 cell development
 positive regulation of neuron projection development
 cellular component biogenesis
 regulation of nuclear-transcribed mRNA catabolic
 process, deadenylation-dependent decay
 regulation of cell shape
 regulation of nitrogen compound metabolic process
 positive regulation of cell differentiation involved
 in phenotypic switching
 pyramidal neuron development
 myeloid leukocyte migration
 cellular metabolic process
 response to estradiol
 calcium ion transport
 nucleoside triphosphate biosynthetic process
 regulation of mRNA splicing, via spliceosome
 regulation of kinase activity
 establishment of localization
 cellular developmental process
 neurotransmitter receptor localization to postsynaptic
 specialization membrane
 regulation of localization
 cellular process
 phosphatidylinositol phosphate biosynthetic process
 regulation of attachment of spindle microtubules to
 kinetochore
 positive regulation of receptor clustering
 intermediate filament organization
 synaptic vesicle transport along microtubule
 actin filament bundle organization
 regulation of gliogenesis
 insulin secretion
 transport
 presynaptic endocytosis
 long-chain fatty acid import into cell
 cerebral cortex development
 axon development
 hormone secretion
 short-chain fatty acid metabolic process

regulation of protein-glutamine gamma-glutamyltransferase activity
 cellular response to calcium ion
 establishment of cell polarity regulating cell shape
 regulation of postsynaptic cytosolic calcium ion concentration
 positive regulation of DNA topoisomerase (ATP-hydrolyzing) activity
 regulation of neurotransmitter receptor activity
 fast, calcium ion-dependent exocytosis of neurotransmitter
 regulation of DNA catabolic process
 alditol phosphate metabolic process
 regulation of NAD metabolic process
 organonitrogen compound metabolic process
 fibroblast proliferation
 cellular response to corticosteroid stimulus
 glycerolipid metabolic process
 cellular response to inorganic substance
 positive regulation of reactive oxygen species
 biosynthetic process
 regulation of response to stimulus
 glucose homeostasis
 axo-dendritic transport
 monoatomic cation homeostasis
 positive regulation of hydrogen peroxide biosynthetic process
 response to glycine
 anterograde trans-synaptic signaling
 synaptic vesicle fusion to presynaptic active zone
 membrane
 homeostatic process
 CRD-mediated mRNA stabilization
 phosphate-containing compound metabolic process
 regulation of cobalamin metabolic process
 cell death
 regulation of peptide transport
 ribonucleotide biosynthetic process
 lipid metabolic process
 cellular response to nitric oxide
 arginine catabolic process to glutamate
 positive regulation of histone acetylation
 intracellular lipid transport
 regulation of neurotransmitter secretion
 positive regulation of protein-glutamine gamma-glutamyltransferase activity
 synaptic transmission, serotonergic
 cellular response to chromate
 intracellular calcium ion homeostasis
 postsynaptic cytoskeleton organization

	organic substance transport
	negative regulation of iron ion import across plasma
membrane	
	regulation of stem cell differentiation
	regulation of RNA splicing
	maintenance of postsynaptic density structure
	cellular nitrogen compound biosynthetic process
	sequestering of actin monomers
	positive regulation of multicellular organismal
process	
	secretion
	regulation of reactive oxygen species biosynthetic
process	
	primary metabolic process
	regulation of organelle transport along microtubule
	positive regulation of RNA export from nucleus
	modulation of chemical synaptic transmission
	apoptotic mitochondrial changes
	regulation of trans-synaptic signaling
	regulation of alternative mRNA splicing, via
spliceosome	
	cellular response to metal ion
	regulation of hormone secretion
	ATP metabolic process
	cell-substrate junction organization
	endosome organization
	action potential
	protein heterooligomerization
	positive regulation of glial cell differentiation
	positive regulation of peptide hormone secretion
	excitatory postsynaptic potential
	dosage compensation
	regulation of postsynapse organization
	social behavior
	nitrogen compound metabolic process
	reactive oxygen species metabolic process
	protein-DNA complex disassembly
	protein tetramerization
	neuron recognition
	monocarboxylic acid metabolic process
	response to calcium ion
	establishment or maintenance of polarity of follicular
epithelium	
	positive regulation of arginase activity
	gliogenesis
	leukocyte chemotaxis
	regulation of unidimensional cell growth
	postsynaptic modulation of chemical synaptic
transmission	
	erythrocyte differentiation

	regulation of cell communication
	vesicle localization
deadenylation-dependent decay	nuclear-transcribed mRNA catabolic process,
proliferation	negative regulation of oligodendrocyte progenitor
	regulation of primary metabolic process
	anterograde axonal transport
process	positive regulation of hydrogen peroxide metabolic
	regulation of cytosolic calcium ion concentration
	brain development
	regulation of muscle cell apoptotic process
	negative regulation of Ras protein signal transduction
	positive regulation of cellular process
	90S preribosome assembly
	synaptic vesicle endocytosis
	response to sodium arsenite
	neural precursor cell proliferation
	arginine catabolic process to proline
	vocalization behavior
	signal release
glutamatergic	positive regulation of synaptic transmission,
	positive regulation of leukocyte migration
	monoatomic cation transmembrane transport
	regulation of signaling receptor activity
	positive regulation of nitric oxide metabolic process
	regulation of molecular function
	positive regulation of hydrolase activity
	receptor internalization
	respiratory electron transport chain
	dendritic transport of ribonucleoprotein complex
	ATP biosynthetic process
muscle cell differentiation involved in phenotypic switching	positive regulation of vascular associated smooth
	carbohydrate homeostasis
	exploration behavior
	establishment of protein localization to chromatin
	nitrate catabolic process
	regulation of protein localization to membrane
	nitric oxide metabolic process
	developmental maturation
presynaptic active zone membrane	positive regulation of synaptic vesicle fusion to
	negative regulation of long-term synaptic potentiation
	cytoskeleton-dependent intracellular transport
	regulation of secretion by cell
	monoatomic ion transport
	regulation of synaptic vesicle exocytosis

	neuronal action potential
	positive regulation of mRNA catabolic process
	positive regulation of keratinocyte differentiation
	regulation of synapse assembly
	catabolic process
leading edge	positive regulation of protein localization to cell
	inorganic ion homeostasis
	positive regulation of isomerase activity
	positive regulation of DNA repair
	positive regulation of SUMO transferase activity
	protein localization to synapse
	response to salt
	neuron apoptotic process
	RNA destabilization
	negative regulation of biological process
	oligodendrocyte progenitor proliferation
	regulation of protein secretion
	regulation of postsynaptic membrane potential
	regulation of establishment of cell polarity
regulating cell shape	
	positive regulation of secretion
	Schwann cell migration
	synapse assembly
	protein localization
	response to alkaloid
	cellular response to dexamethasone stimulus
	double-strand break repair
	establishment or maintenance of bipolar cell polarity
	telencephalon development
	dicarboxylic acid metabolic process
	regulation of cAMP-dependent protein kinase activity
	spontaneous synaptic transmission
	cellular response to salt
	protein metabolic process
	secretion by cell
	lipid modification
	lysosomal protein catabolic process
	glycerophospholipid metabolic process
	intrinsic apoptotic signaling pathway
	regulation of receptor internalization
	regulation of transcription by RNA polymerase I
	exocytosis
	regulation of multicellular organismal development
	second-messenger-mediated signaling
	regulation of lamellipodium organization
	maintenance of location
	postsynaptic neurotransmitter receptor diffusion
trapping	
	axonal transport

	axonal transport of mitochondrion
	negative regulation of neuron apoptotic process
	cellular organohalogen metabolic process
	negative regulation of cell morphogenesis
	regulation of synaptic transmission, glutamatergic
	ionotropic glutamate receptor signaling pathway
	response to glucocorticoid
	regulation of mRNA metabolic process
	hormone transport
	response to organonitrogen compound
	protein localization to plasma membrane
	regulation of apoptotic DNA fragmentation
	glutamate receptor signaling pathway
	regulation of cellular component size
	regulation of cellular component organization
	intracellular signal transduction
	regulation of multicellular organismal process
	regulation of peptide secretion
	positive regulation of dendrite development
	response to cocaine
	intrinsic apoptotic signaling pathway in response to
oxidative stress	
	phosphatidylinositol metabolic process
	nitrogen compound transport
	neurotransmitter receptor diffusion trapping
	negative regulation of amide metabolic process
	protein-containing complex organization
	long-term synaptic depression
	monoatomic cation transport
	apoptotic process
	chemical synaptic transmission
	associative learning
	negative regulation of unidimensional cell growth
	microtubule-based movement
	central nervous system neuron development
	regulation of DNA repair
	cellular response to insulin-like growth factor
stimulus	
	extrinsic apoptotic signaling pathway
	calcium-dependent activation of synaptic vesicle
fusion	
	establishment or maintenance of apical/basal cell
polarity	
	regulation of signaling
	metal ion transport
	synaptic vesicle exocytosis
	regulation of transcription of nucleolar large rRNA by
RNA polymerase I	
	synaptic vesicle cytoskeletal transport
	regulation of isomerase activity

- metabolic process
- negative regulation of programmed cell death
- RNA localization to chromatin
- regulation of cellular catabolic process
- propylene metabolic process
- mitochondrion localization
- anatomical structure development
- chemorepulsion of branchiomotor axon
- response to oxygen-containing compound
- positive regulation of cobalamin metabolic process
- amyloid-beta clearance
- clathrin coat assembly
- regulation of extrinsic apoptotic signaling pathway
- programmed cell death
- negative regulation of protein localization
- hemopoiesis
- positive regulation of nervous system development
- response to catecholamine
- protein-containing complex assembly
- negative regulation of cardiac muscle cell contraction
- cell chemotaxis
- monoatomic ion transmembrane transport
- response to alcohol
- regulation of cell development
- regulation of hydrogen peroxide biosynthetic process
- response to ethanol
- response to stress
- protein complex oligomerization
- organelle transport along microtubule
- regulation of axonogenesis
- regulated exocytosis
- regulation of reactive oxygen species metabolic

process

- forebrain development
- dendritic spine organization
- synaptic vesicle recycling
- positive regulation of reactive oxygen species

metabolic process

- memory
- calcium ion homeostasis
- protein heterotetramerization
- positive regulation of calcium ion-dependent

exocytosis of neurotransmitter

- regulation of mRNA stability
- regulation of DNA topoisomerase (ATP-hydrolyzing)

activity

- response to epinephrine
- peptide hormone secretion
- regulation of monoatomic ion transport
- positive regulation of myoblast differentiation

- regulation of long-chain fatty acid import into cell
 - vesicle organization
 - positive regulation of binding
 - clathrin-dependent synaptic vesicle endocytosis
 - cellular component maintenance
 - regulation of cell population proliferation
 - peptide transport
 - AV node cell-bundle of His cell adhesion involved in
- cell communication
 - receptor diffusion trapping
 - regulation of dopamine secretion
 - response to cytokine
 - regulation of sister chromatid segregation
 - cellular response to organic substance
 - regulation of oligodendrocyte differentiation
 - neurotransmitter transport
 - regulation of cell cycle
 - microtubule polymerization based movement
 - cell junction maintenance
 - intracellular glutamate homeostasis
 - positive regulation of biological process
 - vesicle fusion to plasma membrane
 - response to external stimulus
 - positive regulation of neurogenesis
 - monoatomic ion homeostasis
 - phosphorus metabolic process
 - cellular component organization
 - regulation of neurotransmitter levels
 - regulation of neurogenesis
 - aerobic respiration
 - response to metal ion
 - regulation of cell differentiation
 - pallium development
 - signaling
 - establishment of mitochondrion localization,
- microtubule-mediated
 - regulation of growth
 - negative regulation of microtubule polymerization
 - regulation of cell junction assembly
 - anatomical structure morphogenesis
 - cellular response to stress
 - postsynaptic endocytosis
 - regulation of intrinsic apoptotic signaling pathway
 - positive regulation of developmental process
 - dopamine secretion
 - regulation of protein localization to cell periphery
 - establishment of planar polarity of follicular
- epithelium
 - regulation of mRNA processing
 - nitric oxide catabolic process

	response to light stimulus
	positive regulation of endosome organization
	positive regulation of nucleobase-containing compound
transport	glycerolipid biosynthetic process
	response to UV
	inorganic ion transmembrane transport
	cellular organofluorine metabolic process
	positive regulation of cellular catabolic process
	establishment of mitochondrion localization by
microtubule attachment	regulation of hydrogen peroxide metabolic process
	regulation of insulin secretion
	intracellular amino acid homeostasis
	phospholipid metabolic process
	proton transmembrane transport
	regulation of neurotransmitter transport
	hydrogen peroxide metabolic process
	lipid import into cell
	regulation of binding
	postsynapse assembly
	synaptic vesicle membrane organization
	transport along microtubule
	biological regulation
	vesicle budding from membrane
	ensheathment of neurons
	regulation of double-strand break repair
	axon regeneration
	regulation of oligodendrocyte progenitor proliferation
	negative regulation of actin filament bundle assembly
	regulation of glial cell differentiation
	negative regulation of apoptotic process
	cellular component assembly
	positive regulation of GTPase activity
	cell communication
	mitochondrial DNA catabolic process
	response to selenium ion
	axonogenesis
	organophosphate biosynthetic process
	negative regulation of blood circulation
	response to organic substance
	regulation of mammary gland epithelial cell
proliferation	positive regulation of double-strand break repair
	regulation of cellular process
	response to radiation
	regulation of protein localization to plasma membrane
	negative regulation of transcription by RNA polymerase
I	protein localization to postsynaptic membrane

- neurofilament bundle assembly
- response to axon injury
- negative regulation of dendritic spine maintenance
- regulation of small molecule metabolic process
- response to nitrogen compound
- signal release from synapse
- arginine catabolic process to proline via ornithine
- synaptic vesicle cycle
- negative regulation of interleukin-18-mediated
- signaling pathway
 - apoptotic signaling pathway
 - positive regulation of attachment of spindle
- microtubules to kinetochore
 - organic substance metabolic process
 - response to gamma radiation
 - regulation of response to calcium ion
 - chemical homeostasis
 - microtubule-based transport
 - cellular response to type II interferon
 - negative regulation of ventricular cardiac muscle cell
- action potential
 - negative regulation of postsynaptic density
- organization
 - establishment of mitochondrion localization
 - export from cell
 - regulation of metabolic process
 - actin filament bundle assembly
 - actin filament fragmentation
 - phosphatidylinositol-mediated signaling
 - positive regulation of nitrogen compound metabolic
- process
 - regulation of dendritic spine maintenance
 - regulation of cell-substrate adhesion
 - regulation of aspartic-type endopeptidase activity
- involved in amyloid precursor protein catabolic process
 - maintenance of location in cell
 - mitochondrion transport along microtubule
 - oxidative phosphorylation
 - protein homooligomerization
 - leukocyte migration
 - calcium ion export across plasma membrane
 - intracellular monoatomic ion homeostasis
 - positive regulation of calcium ion-dependent
- exocytosis
 - electron transport chain
 - neurotransmitter receptor internalization
 - regulation of membrane potential
 - cellular localization
 - protein-containing complex localization
 - response to cation stress

	cellular response to caloric restriction
	postsynaptic intermediate filament cytoskeleton
organization	
	trans-synaptic signaling
	regulation of nervous system process
	developmental growth
	positive regulation of excitatory postsynaptic
potential	
	nitric oxide biosynthetic process
	cellular respiration
	regulation of vesicle fusion
Acute F 216	cellular response to UV
	positive regulation of transferase activity
	regulation of calcium ion transmembrane transporter
activity	
	positive regulation of signal transduction by p53
class mediator	
	regulation of cytoplasmic mRNA processing body
assembly	
	regulation of proteolysis involved in protein
catabolic process	
	cellular response to light stimulus
	regulation of transporter activity
	negative regulation of mRNA metabolic process
	nuclear-transcribed mRNA catabolic process
	tube development
	regulation of canonical Wnt signaling pathway
	ribosomal large subunit assembly
	regulation of intracellular steroid hormone receptor
signaling pathway	
	response to angiotensin
	actin filament severing
	regulation of telomere maintenance via telomerase
	positive regulation of protein localization to
chromosome, telomeric region	
	positive regulation of protein transport
	positive regulation of telomere maintenance
	regulation of intracellular estrogen receptor
signaling pathway	
	positive regulation of phosphate metabolic process
	peptidyl-serine modification
	protein autophosphorylation
	hexose transmembrane transport
	positive regulation of protein-containing complex
disassembly	
	regulation of barbed-end actin filament capping
	cellular response to radiation
	NAD metabolic process
	positive regulation of signal transduction
	response to mineralocorticoid

	telomere maintenance via telomerase
	negative regulation of protein modification by small
protein conjugation or removal	
	negative regulation of plasma membrane bounded cell
projection assembly	
	negative regulation of protein-containing complex
disassembly	
	response to steroid hormone
	negative regulation of ubiquitin protein ligase
activity	
	negative regulation of synapse organization
	positive regulation of supramolecular fiber
organization	
	proteolysis involved in protein catabolic process
	intracellular monoatomic anion homeostasis
	negative regulation of GTPase activity
	regulation of monoatomic ion transmembrane transporter
activity	
	response to endoplasmic reticulum stress
	negative regulation of protein depolymerization
	negative regulation of protein modification process
	glucose transmembrane transport
	regulation of microtubule depolymerization
	cellular response to endogenous stimulus
	modification-dependent protein catabolic process
	regulation of protein maturation
	response to ketone
	positive regulation of transmembrane transport
	cell projection assembly
	modulation by host of viral process
	microtubule depolymerization
	peptidyl-serine phosphorylation
	negative regulation of transferase activity
	regulation of DNA damage response, signal transduction
by p53 class mediator resulting in transcription of p21 class mediator	
	cellular response to mineralocorticoid stimulus
	monosaccharide transmembrane transport
	positive regulation of kinase activity
	positive regulation of intracellular signal
transduction	
	peptidyl-cysteine S-nitrosylation
	ruffle assembly
	PERK-mediated unfolded protein response
	regulation of protein localization to chromosome,
telomeric region	
	regulation of phosphorylation
	response to methylmercury
	positive regulation by host of viral process
	positive regulation of cellular component biogenesis
	positive regulation of protein modification process

	regulation of Wnt signaling pathway protein nitrosylation tube morphogenesis positive regulation of cytoskeleton organization heterocycle catabolic process ubiquitin-dependent protein catabolic process Ras protein signal transduction response to rapamycin positive regulation of phosphorylation regulation of Ras protein signal transduction regulation of translational initiation in response to
stress	rhythmic process regulation of transmembrane transporter activity regulation of response to stress G protein-coupled receptor signaling pathway involved
in heart process	negative regulation of catalytic activity regulation of phospholipid translocation regulation of ubiquitin-protein transferase activity carbohydrate transmembrane transport negative regulation of catabolic process regulation of ubiquitin protein ligase activity regulation of phosphate metabolic process neural tube formation actin filament depolymerization regulation of signal transduction by p53 class
mediator	primary neural tube formation intracellular steroid hormone receptor signaling
pathway	growth hormone receptor signaling pathway negative regulation of anoikis regulation of protein modification by small protein
conjugation or removal	positive regulation of MAP kinase activity Golgi vesicle transport NADH metabolic process positive regulation of Wnt signaling pathway embryonic epithelial tube formation positive regulation of apoptotic signaling pathway organonitrogen compound catabolic process follicle-stimulating hormone signaling pathway response to endogenous stimulus telomere maintenance neural tube closure negative regulation of microtubule depolymerization regulation of telomere maintenance positive regulation of protein-containing complex
assembly	

- intracellular chloride ion homeostasis
- regulation of protein-containing complex disassembly
- binding of sperm to zona pellucida
- regulation of telomerase activity
- response to growth hormone
- negative regulation of protein ubiquitination
- organic cyclic compound catabolic process
- regulation of protein phosphorylation
- regulation of sulfur metabolic process
- protein acylation
- positive regulation of gene expression
- positive regulation of protein binding
- regulation of ruffle assembly
- peptidyl-amino acid modification
- telomere maintenance via telomere lengthening
- response to topologically incorrect protein
- regulation of small GTPase mediated signal
- transduction
 - cellular response to hormone stimulus
 - positive regulation of protein phosphorylation
 - regulation of protein stability
 - positive regulation of telomere maintenance via
- telomere lengthening
 - protein maturation
 - regulation of translation in response to endoplasmic
- reticulum stress
 - regulation of phospholipid transport
 - formaldehyde metabolic process
 - positive regulation of protein catabolic process
 - nicotinamide nucleotide metabolic process
 - pyridine nucleotide metabolic process
 - positive regulation of phosphorus metabolic process
 - regulation of cation channel activity
 - heme metabolic process
 - protein stabilization
 - positive regulation of protein kinase activity
 - negative regulation of endoplasmic reticulum stress-
- induced eIF2 alpha phosphorylation
 - eIF2alpha phosphorylation in response to endoplasmic
- reticulum stress
 - cellular response to chemical stress
 - steroid hormone mediated signaling pathway
 - regulation of establishment of protein localization to
- telomere
 - positive regulation of DNA biosynthetic process
 - iron coordination entity transport
 - tube formation
 - cellular response to angiotensin
 - response to aldosterone
 - cellular response to reactive oxygen species

	regulation of glucose transmembrane transport
	mRNA catabolic process
	negative regulation of protein phosphorylation
	cell-cell recognition
chromosome	regulation of establishment of protein localization to
	negative regulation of actin filament depolymerization
localization to	positive regulation of establishment of protein
	telomere
	telomere organization
	proteasome assembly
endoplasmic reticulum stress	regulation of translation initiation in response to
	regulation of protein depolymerization
phosphorylation	regulation of translational initiation by eIF2 alpha
	establishment of protein localization to chromosome
	positive regulation of endocytosis
	nuclear transport
	activation of protein kinase activity
	DNA biosynthetic process
morphogenesis	anatomical structure formation involved in
	cellular response to hydrogen peroxide
	acetate ester transport
	proteasomal protein catabolic process
lengthening	regulation of telomere maintenance via telomere
	cellular response to steroid hormone stimulus
	RNA catabolic process
	macrophage proliferation
	progesterone receptor signaling pathway
	porphyrin-containing compound metabolic process
transport	endoplasmic reticulum to Golgi vesicle-mediated
	regulation of actin filament depolymerization
	acetylcholine transport
	nucleocytoplasmic transport
	regulation of phosphorus metabolic process
	nucleobase-containing compound catabolic process
	regulation of DNA biosynthetic process
	aggresome assembly
	protein localization to chromosome
	modification-dependent macromolecule catabolic process
	regulation of protein localization to chromatin
	protein catabolic process
	protein depolymerization
localization	positive regulation of establishment of protein
	aromatic compound catabolic process

intracellular estrogen receptor signaling pathway
response to hormone
ovulation cycle
RNA-templated DNA biosynthetic process
post-Golgi vesicle-mediated transport
regulation of protein localization to nucleus
proteolysis
pyridine-containing compound metabolic process
positive regulation of ruffle assembly
peptidyl-cysteine modification
regulation of cell growth
plasma membrane bounded cell projection assembly
cellular response to oxidative stress
regulation of monoatomic cation transmembrane

transport