Table 1. Biological process

Level 2	Numbers Transcripts (%)	Level 3	Numbers Transcripts (%)
cellular process	32,896(95)	single-organism cellular process	28,309(86)
		cellular metabolic process	26,463(80)
		regulation of cellular process	21,718(66)
		cellular component organization	17,345(53)
		cellular response to stimulus	17,224(52)
		positive regulation of cellular process	13,038(40)
		negative regulation of cellular process	11,664(35)
		multi-organism cellular process	3,532(11)
		cell wall organization or biogenesis	175(1)
		cell separation after cytokinesis	68(0)
		cytolysis	59(0)
		intercellular transport	49(0)
		cellular detoxification	42(0)
		phenotypic switching	22(0)
single-organism process	31,364(90)	single-organism cellular process	28,309(90)
		single-multicellular organism process	19,509(62)
		single-organism developmental process	18,866(60)
		single-organism metabolic process	17,978(57)
		single organism signaling	13,688(44)
		single-organism localization	13,195(42)
		death	5,514(18)
		cell proliferation	4,559(15)
		single organism reproductive process	2,555(8)
		single organism cell adhesion	1,872(6)
		single-organism behavior	933(3)
		pigmentation	325(1)
		filamentous growth	183(1)
		natural killer cell mediated cytotoxicity	130(0)
		ovulation cycle process	125(0)
		T cell mediated cytotoxicity	41(0)
		nitrogen utilization	19(0)
		carbohydrate utilization	12(0)
		complement-dependent cytotoxicity	4(0)
		carbon utilization	4(0)
metabolic process	28,867(83)	organic substance metabolic process	26,676(92)
		cellular metabolic process	26,463(92)

		nitrogen compound metabolic process single-organism metabolic process biosynthetic process regulation of metabolic process positive regulation of metabolic process negative regulation of metabolic process catabolic process methylation hormone metabolic process multi-organism metabolic process detoxification wax metabolic process	18,476(64) 17,978(62) 16,092(56) 15,887(55) 9,999(35) 7,737(27) 7,507(26) 854(3) 683(2) 630(2) 43(0) 4(0)
biological regulation	26,082(75)	regulation of biological quality regulation of molecular function	11,177(43) 8,343(32)
regulation of biological process	24,949(72)	regulation of cellular process regulation of metabolic process regulation of multicellular organismal process regulation of response to stimulus regulation of developmental process regulation of signaling regulation of localization regulation of immune system process regulation of cellular component biogenesis regulation of multi-organism process regulation of homeostatic process regulation of growth regulation of action potential regulation of reproductive process regulation of plasma lipoprotein particle levels regulation of circadian rhythm regulation of fibrinolysis regulation of cell killing regulation of long-term synaptic potentiation regulation of long term synaptic depression	21,718(87) 15,887(64) 11,114(45) 10,597(42) 9,598(38) 8,648(35) 7,644(31) 4,579(18) 2,795(11) 2,362(9) 2,071(8) 1,705(7) 1,501(6) 437(2) 316(1) 255(1) 251(1) 171(1) 106(0) 35(0)

		regulation of nitrogen utilization regulation of estrogen receptor binding regulation of asexual reproduction regulation of membrane hyperpolarization regulation of Rho guanyl-nucleotide exchange factor activity regulation of carbohydrate utilization	14(0) 12(0) 11(0) 8(0) 6(0) 6(0)
response to stimulus	21,134(61)	cellular response to stimulus response to stress response to chemical regulation of response to stimulus response to external stimulus response to endogenous stimulus positive regulation of response to stimulus immune response negative regulation of response to stimulus response to abiotic stimulus response to biotic stimulus detection of stimulus muscle adaptation protein activation cascade response to redox state response to inactivity response to stimulus involved in	17,224(81) 12,376(59) 12,344(58) 10,597(50) 7,813(37) 6,202(29) 6,096(29) 4,230(20) 4,144(20) 3,969(19) 2,776(13) 900(4) 452(2) 178(1) 106(1) 52(0) 37(0)
multicellular organismal process	20,410(59)	single-multicellular organism process regulation of multicellular organismal process positive regulation of multicellular organismal process negative regulation of multicellular organismal process multicellular organismal process multicellular organism reproduction multi-multicellular organism process	27(0) 19,509(96) 11,114(54) 4,450(22) 2,858(14) 1,440(7) 336(2)
developmental process	19,094(55)	single-organism developmental process anatomical structure development regulation of developmental process	18,866(99) 17,515(92) 9,598(50)

		anatomical structure morphogenesis anatomical structure formation involved	8,776(46)
		in morphogenesis positive regulation of developmental	3,883(20)
		process negative regulation of developmental	3,303(17)
		process developmental process involved in	2,266(12)
		reproduction	1,421(7)
		maintenance of cell number	404(2)
		abscission	20(0)
		development involved in symbiotic interaction	10(0)
		spore germination	19(0) 14(0)
		dormancy process	10(0)
		doffilaticy process	10(0)
localization	17,838(51)	establishment of localization	15,180(85)
	, , ,	single-organism localization	13,195(74)
		cellular localization	9,355(52)
		macromolecule localization	7,924(44)
		regulation of localization	7,644(43)
		localization of cell	4,082(23)
		maintenance of location	1,284(7)
		multi-organism localization	305(2)
callular component			
cellular component organization or biogenesis	17,738(51)	cellular component organization	17,345(98)
	,,(,	cellular component biogenesis	8,312(47)
positive regulation of			
biological process	14,955(43)	positive regulation of cellular process	13,038(87)
		positive regulation of metabolic process positive regulation of response to	9,999(67)
		stimulus	6,096(41)
		positive regulation of signaling positive regulation of multicellular	4,828(32)
		organismal process positive regulation of developmental	4,450(30)
		process	3,303(22)
		positive regulation of transport	3,252(22)
		positive regulation of immune system	2 000/40\
		process	2,800(19)
		positive regulation of locomotion positive regulation of cellular protein	1,380(9)
		localization	1,189(8)

		positive regulation of cellular component biogenesis positive regulation of growth positive regulation of homeostatic process positive regulation of multi-organism process positive regulation of reproductive process positive regulation of action potential positive regulation of membrane depolarization positive regulation of lipid storage positive regulation of cell killing positive regulation of fibrinolysis positive regulation of protein localization to synapse positive regulation of circadian rhythm positive regulation of long term synaptic depression positive regulation of membrane hyperpolarization positive regulation of long-term synaptic potentiation positive regulation of Rho guanyl-nucleotide exchange factor activity positive regulation of ligand-dependent nuclear receptor transcription coactivator activity positive regulation of asexual reproduction	1,014(7) 671(4) 649(4) 645(4) 168(1) 159(1) 64(0) 51(0) 32(0) 23(0) 22(0) 15(0) 8(0) 7(0) 6(0) 6(0)
signaling	13,742(40)	single organism signaling regulation of signaling positive regulation of signaling negative regulation of signaling	13,688(100) 8,648(63) 4,828(35) 3,510(26)
negative regulation biological process		negative regulation of cellular process negative regulation of metabolic process negative regulation of response to stimulus negative regulation of signaling negative regulation of multicellular organismal process negative regulation of developmental	11,664(92) 7,737(61) 4,144(33) 3,510(28) 2,858(22) 2,266(18)

process

		negative regulation of transport	1,403(11)
		negative regulation of locomotion	1,039(8)
		negative regulation of immune system	
		process	1,004(8)
		negative regulation of homeostatic	
		process	769(6)
		negative regulation of multi-organism	
		process	603(5)
		negative regulation of growth	456(4)
		negative regulation of cellular protein	
		localization	416(3)
		negative regulation of fibrinolysis	154(1)
		negative regulation of lipid storage	98(1)
		negative regulation of reproductive	33(=)
		process	80(1)
		negative regulation of cell killing	45(0)
		negative regulation of circadian rhythm	31(0)
		negative regulation of membrane	45(0)
		depolarization	15(0)
		negative regulation of long-term	= (0)
		synaptic potentiation	5(0)
		negative regulation of ligand-dependent	
		nuclear receptor transcription	= (a)
		coactivator activity	5(0)
		negative regulation of action potential	4(0)
multi-organism process	7,228(21)	multi-organism cellular process	3,532(49)
	,,(,		
Ç .	7,223(21)	interspecies interaction between	3,415(47)
J ,	,,3(_1,	interspecies interaction between organisms	3,415(47) 2.608(36)
J ,	,,===(==1)	interspecies interaction between organisms response to other organism	2,608(36)
J ,	,,===(==1)	interspecies interaction between organisms response to other organism regulation of multi-organism process	2,608(36) 2,071(29)
J ,	,,===(==1)	interspecies interaction between organisms response to other organism regulation of multi-organism process multi-organism reproductive process	2,608(36)
J	,,===(==1)	interspecies interaction between organisms response to other organism regulation of multi-organism process multi-organism reproductive process modification of morphology or	2,608(36) 2,071(29) 1,828(25)
	,,===(==1)	interspecies interaction between organisms response to other organism regulation of multi-organism process multi-organism reproductive process modification of morphology or physiology of other organism	2,608(36) 2,071(29)
	,,===(==1)	interspecies interaction between organisms response to other organism regulation of multi-organism process multi-organism reproductive process modification of morphology or physiology of other organism positive regulation of multi-organism	2,608(36) 2,071(29) 1,828(25) 673(9)
	,,===(==1)	interspecies interaction between organisms response to other organism regulation of multi-organism process multi-organism reproductive process modification of morphology or physiology of other organism positive regulation of multi-organism process	2,608(36) 2,071(29) 1,828(25) 673(9) 645(9)
	,,===(==1)	interspecies interaction between organisms response to other organism regulation of multi-organism process multi-organism reproductive process modification of morphology or physiology of other organism positive regulation of multi-organism process multi-organism metabolic process	2,608(36) 2,071(29) 1,828(25) 673(9)
	,,===(==1)	interspecies interaction between organisms response to other organism regulation of multi-organism process multi-organism reproductive process modification of morphology or physiology of other organism positive regulation of multi-organism process multi-organism metabolic process negative regulation of multi-organism	2,608(36) 2,071(29) 1,828(25) 673(9) 645(9) 630(9)
	,,===(==1)	interspecies interaction between organisms response to other organism regulation of multi-organism process multi-organism reproductive process modification of morphology or physiology of other organism positive regulation of multi-organism process multi-organism metabolic process negative regulation of multi-organism process	2,608(36) 2,071(29) 1,828(25) 673(9) 645(9) 630(9)
	,,===(==1)	interspecies interaction between organisms response to other organism regulation of multi-organism process multi-organism reproductive process modification of morphology or physiology of other organism positive regulation of multi-organism process multi-organism metabolic process negative regulation of multi-organism process multi-multicellular organism process	2,608(36) 2,071(29) 1,828(25) 673(9) 645(9) 630(9) 603(8) 336(5)
	,,===(==1)	interspecies interaction between organisms response to other organism regulation of multi-organism process multi-organism reproductive process modification of morphology or physiology of other organism positive regulation of multi-organism process multi-organism metabolic process negative regulation of multi-organism process multi-multicellular organism process multi-organism localization	2,608(36) 2,071(29) 1,828(25) 673(9) 645(9) 630(9) 603(8) 336(5) 305(4)
	,,===(==1)	interspecies interaction between organisms response to other organism regulation of multi-organism process multi-organism reproductive process modification of morphology or physiology of other organism positive regulation of multi-organism process multi-organism metabolic process negative regulation of multi-organism process multi-multicellular organism process multi-organism localization pathogenesis	2,608(36) 2,071(29) 1,828(25) 673(9) 645(9) 630(9) 603(8) 336(5) 305(4) 187(3)
	,,===(==)	interspecies interaction between organisms response to other organism regulation of multi-organism process multi-organism reproductive process modification of morphology or physiology of other organism positive regulation of multi-organism process multi-organism metabolic process negative regulation of multi-organism process multi-multicellular organism process multi-organism localization pathogenesis multi-organism behavior	2,608(36) 2,071(29) 1,828(25) 673(9) 645(9) 630(9) 603(8) 336(5) 305(4)
	,,===(==1)	interspecies interaction between organisms response to other organism regulation of multi-organism process multi-organism reproductive process modification of morphology or physiology of other organism positive regulation of multi-organism process multi-organism metabolic process negative regulation of multi-organism process multi-multicellular organism process multi-organism localization pathogenesis multi-organism behavior intraspecies interaction between	2,608(36) 2,071(29) 1,828(25) 673(9) 645(9) 630(9) 603(8) 336(5) 305(4) 187(3) 183(3)
	,,===(==1)	interspecies interaction between organisms response to other organism regulation of multi-organism process multi-organism reproductive process modification of morphology or physiology of other organism positive regulation of multi-organism process multi-organism metabolic process negative regulation of multi-organism process multi-multicellular organism process multi-organism localization pathogenesis multi-organism behavior	2,608(36) 2,071(29) 1,828(25) 673(9) 645(9) 630(9) 603(8) 336(5) 305(4) 187(3)

		adhesion of symbiont to host growth involved in symbiotic interaction development involved in symbiotic interaction	161(2) 26(0) 19(0)
immune system process	7,210(21)	regulation of immune system process immune response positive regulation of immune system	4,579(64) 4,230(59)
		process	2,800(39)
		immune effector process	2,310(32)
		immune system development	1,958(27)
		activation of immune response	1,885(26)
		leukocyte activation	1,638(23)
		negative regulation of immune system process	1,004(14)
		antigen processing and presentation	859(12)
		leukocyte migration	791(11)
		myeloid cell homeostasis production of molecular mediator of	311(4)
		immune response	289(4)
		lymphocyte costimulation somatic diversification of immune	171(2)
		receptors	124(2)
		leukocyte homeostasis	121(2)
		T cell selection	76(1)
		tolerance induction	38(1)
locomotion	5,855(17)	cell motility	4,082(70)
		regulation of locomotion	2,795(48)
		taxis	2,511(43)
		positive regulation of locomotion	1,380(24)
		negative regulation of locomotion movement in environment of other organism involved in symbiotic	1,039(18)
		interaction locomotion involved in locomotory	900(15)
		behavior dissemination or transmission of organism from other organism involved	18(0)
		in symbiotic interaction	12(0)
		directional locomotion	2(0)
biological adhesion	3,906(11)	cell adhesion adhesion of symbiont to host	3,760(96) 161(4)

reproductive process	2,907(8)	single organism reproductive process multi-organism reproductive process developmental process involved in reproduction multicellular organismal reproductive process regulation of reproductive process positive regulation of reproductive process negative regulation of reproductive process reproductive behavior reproductive process in single-celled organism	2,555(88) 1,828(63) 1,421(49) 1,401(48) 316(11) 168(6) 80(3) 19(1) 14(0)
growth	2,366(7)	regulation of growth cell growth developmental growth positive regulation of growth negative regulation of growth filamentous growth growth involved in symbiotic interaction ovarian cumulus expansion primary ovarian follicle growth budding cell bud growth	1,501(63) 1,388(59) 1,294(55) 671(28) 456(19) 183(8) 26(1) 11(0) 2(0) 2(0)
reproduction	2,168(6)	sexual reproduction multicellular organism reproduction meiotic cell cycle asexual reproduction reproduction of a single-celled organism	1,567(72) 1,440(66) 652(30) 72(3) 30(1)
behavior	1,923(6)	single-organism behavior regulation of behavior positive regulation of behavior locomotory behavior negative regulation of behavior multi-organism behavior feeding behavior rhythmic behavior behavioral defense response reproductive behavior	933(49) 763(40) 466(24) 327(17) 314(16) 183(10) 131(7) 60(3) 56(3) 19(1)
biological phase	931(3)	cell cycle phase	913(98)

		estrous cycle phase single-celled organism vegetative growth phase menstrual cycle phase	16(2) 3(0) 2(0)
			_(0)
rhythmic process	701(2)	circadian rhythm	503(72)
		ovulation cycle	139(20)
		ovulation cycle process	125(18)
		rhythmic behavior	60(9)
		ultradian rhythm	2(0)
	2.0(1)		( )
cell killing	218(1)	leukocyte mediated cytotoxicity	184(84)
		regulation of cell killing	106(49)
		positive regulation of cell killing	51(23)
		negative regulation of cell killing	45(21)
		killing of cells of other organism	38(17)
		complement-dependent cytotoxicity	4(2)
cell aggregation	41(0)	cartilage condensation	41(100)

Table 2. Cellular component

Level 2	Numbers Transcripts (%)	Level 3	Numbers Transcripts (%)
cell	32,754(96)	oxidoreductase complex	324(1)
cell part	32,739(96)	intracellular	31,136(95)
	- , ( ,	intracellular part	30,865(94)
		cell periphery	11,735(36)
		plasma membrane	11,289(34)
		endomembrane system	11,031(34)
		cell projection	6,997(21)
		plasma membrane part	6,907(21)
		neuron part	4,695(14)
		envelope	3,800(12)
		cell projection part	3,440(11)
		cell surface	2,399(7)
		nuclear outer membrane-	1,953(6)
		endoplasmic reticulum	, , ,
		membrane network	
		cell leading edge	1,435(4)
		apical part of cell	1,174(4)
		cell body	1,055(3)
		postsynapse	878(3)
		site of polarized growth	475(1)
		midbody	462(1)
		myelin sheath	458(1)
		postsynaptic density	425(1)
		oxidoreductase complex	324(1)
		basal part of cell	318(1)
		sperm part	231(1)
		external encapsulating structure	222(1)
		coated pit	215(1)
		cell division site	200(1)
		cell division site part	180(1)
		cell surface furrow	158(0)
		protein serine/threonine phosphatase complex	122(0)
		retromer complex	93(0)
		periplasmic space	73(0)
		external encapsulating structure part	72(0)
		contractile ring	66(0)

		cen septum	33(0)
		outer dense plaque of desmosome	38(0)
		inner dense plaque of	38(0)
		desmosome	
		Schmidt-Lanterman incisure	36(0)
		compact myelin	36(0)
		cell trailing edge	35(0)
		cell pole	33(0)
		cellular bud	31(0)
		myelin sheath abaxonal region	25(0)
		spitzenkorper	20(0)
		lateral loop	19(0)
		Flemming body	15(0)
		retromer complex, outer shell	10(0)
		annulate lamellae	10(0)
		stereocilia coupling link	9(0)
		myelin sheath adaxonal region	9(0)
		molybdopterin synthase complex	7(0)
		type II protein secretion system complex	5(0)
		retromer complex, inner shell	5(0)
		cell envelope Sec protein transport complex	4(0)
		type I protein secretion system complex	3(0)
		lateral part of cell	3(0)
organelle	29,819(87)	intracellular organelle	27,838(93)
		membrane-bounded organelle	27,775(93)
		non-membrane-bounded organelle	11,676(39)
		vesicle	11,488(39)
		extracellular organelle	8,873(30)
		cilium	1,969(7)
		organellar ribosome	110(0)
membrane	22,507(66)	plasma membrane	11,289(50)
		organelle membrane	8,576(38)
		whole membrane	6,505(29)
		membrane region	4,123(18)
		membrane protein complex	3,707(16)
		nuclear outer membrane- endoplasmic reticulum	1,953(9)

cell septum

55(0)

		membrane network side of membrane outer membrane photosynthetic membrane coated membrane ATPase dependent transmembrane transport complex virion membrane prospore membrane perinuclear endoplasmic reticulum membrane	1,091(5) 360(2) 344(2) 245(1) 130(1) 116(1) 2(0) 1(0)
organelle part	22,071(64)	intracellular organelle part organelle lumen organelle membrane ciliary part contractile fiber part intrinsic component of organelle membrane organellar ribosome lumenal side of membrane stereocilium plasma membrane-derived thylakoid photosystem II organelle membrane contact site plasma membrane-derived photosystem I stereocilium membrane bacterial-type flagellum part symbiont-containing vacuole membrane kinocilium	21,506(97) 12,018(54) 8,576(39) 1,195(5) 1,168(5) 492(2) 110(0) 66(0) 52(0) 40(0) 37(0) 12(0) 10(0) 8(0) 4(0) 4(0)
extracellular region	15,176(44)	extracellular organelle extracellular vesicle synaptic cleft apoplast	8,873(58) 8,871(58) 21(0) 1(0)
macromolecular complex	13,974(41)	protein complex ribonucleoprotein complex chromatin protein-DNA complex	12,010(86) 2,305(16) 1,302(9) 327(2)

		protein-lipid complex	162(1)
membrane part	13,496(39)	intrinsic component of membrane	7,163(53)
		plasma membrane part	6,907(51)
		membrane region	4,123(31)
		membrane protein complex	3,707(27)
		endoplasmic reticulum membrane	1,885(14)
		side of membrane	1,091(8)
		extrinsic component of membrane	744(6)
		respiratory chain	417(3)
		mitochondrial membrane part	372(3)
		nuclear outer membrane	41(0)
		nuclear membrane part	5(0)
membrane-enclosed lumen	12,120(35)	organelle lumen	12,018(99)
		organelle envelope lumen	141(1)
extracellular region part	11,612(34)	extracellular organelle	8,873(76)
		extracellular space	3,777(33)
		proteinaceous extracellular matrix	744(6)
		blood microparticle	404(3)
		basement membrane	253(2)
		intercellular bridge	159(1)
		plasma lipoprotein particle	155(1)
		fibrinogen complex	121(1)
		fibril	98(1)
		complex of collagen trimers	62(1)
		basal lamina	60(1)
		fibrillar collagen trimer	47(0)
		laminin complex	42(0)
		anchoring collagen complex	28(0)
		basement membrane collagen trimer	15(0)
		network-forming collagen trimer	11(0)
		insulin-like growth factor binding protein complex	6(0)
		collagen type VI trimer	6(0)
		sublamina densa	5(0)
		symbiont-containing vacuole	4(0)

		membrane apical lamina of hyaline layer extracellular space of host mucus layer hyaluranon cable	4(0) 2(0) 1(0) 1(0)
cell junction	3,592(10)	anchoring junction cell-substrate junction cell-cell junction	1,927(54) 1,618(45) 1,277(36)
synapse	2,280(7)	postsynapse presynapse neuromuscular junction excitatory synapse inhibitory synapse synaptic cleft asymmetric synapse ribbon synapse symmetric synapse	878(39) 483(21) 132(6) 103(5) 46(2) 21(1) 14(1) 9(0) 8(0)
synapse part	1,582(5)	postsynapse synaptic membrane presynapse postsynaptic density synaptic vesicle dendritic spine terminal bouton presynaptic active zone synaptic vesicle membrane integral component of synaptic vesicle membrane synaptic cleft dendritic spine head dendritic spine membrane dendritic spine neck presynaptic active zone cytoplasmic component cytoskeleton of presynaptic active zone presynaptic active zone membrane	878(55) 509(32) 483(31) 425(27) 367(23) 276(17) 259(16) 103(7) 93(6) 29(2) 21(1) 17(1) 11(1) 6(0) 5(0) 5(0) 4(0)
extracellular matrix	1,352(4)	proteinaceous extracellular matrix	744(55)

other organism part	931(3)	other organism cell host cell part other organism membrane extracellular space of host	922(99) 909(98) 428(46) 2(0)
other organism	931(3)	host	918(99)
virion	808(2)		
virion part	514(2)	viral capsid virion membrane viral membrane viral nucleocapsid viral outer capsid viral tegument viral intermediate capsid	300(58) 116(23) 115(22) 76(15) 21(4) 18(4) 8(2)
extracellular matrix component	476(1)	fibril complex of collagen trimers basal lamina elastic fiber fibrillar collagen trimer laminin complex anchoring collagen complex basement membrane collagen trimer network-forming collagen trimer collagen type VI trimer sublamina densa apical lamina of hyaline layer perineuronal net	253(53) 98(21) 62(13) 60(13) 55(12) 47(10) 42(9) 28(6) 15(3) 11(2) 6(1) 5(1) 4(1) 2(0)
nucleoid	172(1)	mitochondrial nucleoid bacterial nucleoid	135(78) 25(15)

Table 3. Molecular function

Level 2	Numbers Transcripts (%)	Level 3	Numbers Transcripts
binding	32,804(93)	protein binding	26,131(80)
		ion binding	17,424(53)
		organic cyclic compound binding	13,788(42)
		heterocyclic compound binding	13,592(41)
		small molecule binding	7,412(23)
		carbohydrate derivative binding	5,379(16)
		macromolecular complex binding	4,166(13)
		lipid binding	2,300(7)
		cofactor binding	1,077(3)
		sulfur compound binding	724(2)
		binding, bridging	650(2)
		amide binding	633(2)
		carbohydrate binding	460(1)
		modified amino acid binding	319(1)
		drug binding	300(1)
		metal cluster binding	258(1)
		extracellular matrix binding	228(1)
		antigen binding	210(1)
		quaternary ammonium group binding	207(1)
		hormone binding	187(1)
		neurotransmitter binding	146(0)
		oxygen binding	114(0)
		toxic substance binding	77(0)
		pattern binding	77(0)
		acyl binding	67(0)
		selenium binding	35(0)
		host cell surface binding	28(0)
		amine binding	22(0)
		virion binding	21(0)
		microfibril binding	18(0)
		tetrahydrofolyl-poly(glutamate) polymer binding	17(0)
		hydroxyapatite binding	16(0)
		odorant binding	5(0)
		pigment binding	3(0)
		fatty acid derivative binding	3(0)

		dinitrosyl-iron complex binding xenon atom binding platinum binding nitric oxide binding	3(0) 2(0) 2(0) 2(0)
catalytic activity	20,506(58)	hydrolase activity transferase activity oxidoreductase activity ligase activity lyase activity isomerase activity demethylase activity cyclase activity deaminase activity recombinase activity Mo-molybdopterin cofactor sulfurase activity second spliceosomal transesterification activity transposase activity first spliceosomal transesterification activity radical SAM enzyme activity glycogen debranching enzyme	10,188(50) 8,313(41) 3,453(17) 1,106(5) 904(4) 431(2) 92(0) 91(0) 62(0) 36(0) 26(0) 8(0) 6(0) 4(0) 3(0) 3(0)
transporter activity	4,291(12)	activity substrate-specific transporter	3,728(87)
		activity transmembrane transporter activity	3,513(82)
		carbohydrate transporter activity	127(3)
		carbohydrate derivative transporter activity	122(3)
		cofactor transporter activity	107(2)
		toxin transporter activity	101(2)
		vitamin transporter activity	88(2)
		neurotransmitter transporter activity	69(2)
		drug transporter activity	46(1)
		nucleocytoplasmic transporter activity	31(1)
		xenobiotic transporter activity	27(1)
		fatty-acyl-CoA transporter activity	7(0)

molecular transducer activity	3,238(9)	signal transducer activity	2,590(80)
		receptor activity	2,549(79)
molecular function regulator	3,143(9)	enzyme regulator activity	2,314(74)
		guanyl-nucleotide exchange factor activity	553(18)
		channel regulator activity	302(10)
		receptor regulator activity	126(4)
structural molecule activity	2,486(7)	structural constituent of ribosome	1,021(41)
		structural constituent of cytoskeleton	473(19)
		structural constituent of muscle	195(8)
		protein complex scaffold	190(8)
		extracellular matrix structural constituent	140(6)
		structural molecule activity conferring elasticity	51(2)
		structural constituent of eye lens	24(1)
		structural constituent of virion	22(1)
		structural constituent of nuclear pore	15(1)
		structural constituent of cuticle	15(1)
		structural constituent of bone	7(0)
		structural constituent of cell wall	2(0)
transcription factor activity, protein binding	1,549(4)	transcription factor activity, transcription factor binding	1,537(99)
		transcription factor activity, core RNA polymerase binding	3(0)
nucleic acid binding transcription factor activity	1,498(4)	transcription factor activity, sequence-specific DNA binding	1,496(100)
		RNA binding transcription factor activity	2(0)
electron carrier activity	483(1)	cytochrome-c oxidase activity electron transporter, transferring electrons within the cyclic electron transport	104(22) 26(5)

		pathway of photosynthesis activity electron transporter, transferring electrons from CoQH2-cytochrome c reductase complex and cytochrome c oxidase complex activity electron transporter, transferring electrons within cytochrome c oxidase complex activity	8(2) 2(0)
antioxidant activity	219(1)	peroxidase activity	176(80)
		peroxiredoxin activity superoxide dismutase activity	16(7) 9(4)
		thioredoxin-disulfide reductase activity	6(3)
		glutathione dehydrogenase (ascorbate) activity	5(2)
		glutathione-disulfide reductase activity	4(2)
translation regulator activity	86(0)	translation repressor activity	54(63)
,		translation regulator activity, nucleic acid binding	45(52)
		translation factor activity, non- nucleic acid binding	1(1)
chemoattractant activity	48(0)		
nutrient reservoir activity	33(0)		
metallochaperone activity	10(0)	copper chaperone activity iron chaperone activity	8(80) 2(20)
protein tag	7(0)		
chemorepellent activity	4(0)		