

Table S7. Differentially regulated genes (up and down regulated) in the control compared with THyPRP silenced plants in FAZ at 20 h along with their expression values, fold changes, annotations, GO ids and terms.

Worksheet 2 & 3

Set6					
Line	Array	Details	Time	Treated vs. Con	Set
Control – New Yorker	254331010027_1_3	20h_11_AZ	20h	Control	Set 6
Control – New Yorker	254331010027_1_4	20h_12_AZ	20h		
TAPG + TPRP	254331010036_1_3	20h_47_AZ	20h	Treated	
TAPG + TPRP	254331010036_1_4	20h_48_AZ	20h		

Note:

Fold change expression values are provided as logbase 2

Flagging Criteria:

Compromised: If the gProcessedSignal value is less than the background intensity

Detected: If the gProcessedSignal value is above background intensity

Column Header	Description
ProbeName	Unique probe identifier
GeneName	GeneSymbol
Fold	Fold change calculated is log base 2
Flag	Detected or Compromised
GeomeanFold	Average Fold change for the replicates calculated is log base 2
p-Value	t-test p- value
gProcessedSigna	Background subtracted signal intensity

Worksheet 4 & 5

This file contains the fold change for all the spots in the array

GO ID

Gene Ontology ID

GO ACCESSION

Gene Ontology Function name

p-value :

The probability of obtaining the specified GO accession number from a list of random entities. Less the p-value more significant is the GO accession number.

Significant pvalue<0.05

Count in Selection :

This refers to the number of genes in the selected entity (for example, from T-test) list which have that particular GO term.

%Count in Selection :

This refers to the percentage of genes in the input entity list which have that GO term.

Count in Total :

This refers to the number of genes in All Entities which have that GO term.

%Count in Total :

This refers to the percentage of genes in the All Entities list which have that GO term.

Cut off used to filter up and down regulated genes

Upregulated

For filtering upregulation we consider flag should be Detected in the treated sample and can be Compromised or Detected in the control sample and fold>=0.8 in the individual replicates and fold>=1 in the Geomean of treated samples.

Downregulated

For filtering downregulation we consider flag can be Detected or Compromised in the treated sample and should be Detected in the control sample and fold<=-0.8 in the individual replicates and fold<=-1 in the Geomean of treated samples.

Differentially Regulated Probes

Sample	Up	Down
20h_TPRP_AZ vs. 20h_Control_AZ_Sense	1663	1160
20h_TPRP_AZ vs. 20h_Control_AZ_Antisense	1029	807

GT	Series	Symbol	Company	Country	Exchange	Market	Open	High	Low	Close	Volume	Market Cap	PE Ratio	Dividend Yield	EPS	Dividend	Payout Ratio	YTD Return	1Y Return	3Y Return	5Y Return	10Y Return		
GT	Series	1234	Company A	USA	NYSE	Common	100.00	105.00	95.00	102.00	1000000	1000000000	15.00	2.00%	6.67	1.00	15.00%	10.00%	15.00%	15.00%	15.00%	15.00%		
GT	Series	1235	Company B	USA	NYSE	Common	200.00	210.00	190.00	205.00	2000000	2000000000	20.00	1.50%	13.33	2.00	15.00%	12.00%	18.00%	18.00%	18.00%	18.00%	18.00%	
GT	Series	1236	Company C	USA	NYSE	Common	300.00	310.00	290.00	305.00	3000000	3000000000	25.00	1.00%	20.00	3.00	15.00%	14.00%	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%
GT	Series	1237	Company D	USA	NYSE	Common	400.00	410.00	390.00	405.00	4000000	4000000000	30.00	0.80%	26.67	4.00	15.00%	16.00%	24.00%	24.00%	24.00%	24.00%	24.00%	24.00%
GT	Series	1238	Company E	USA	NYSE	Common	500.00	510.00	490.00	505.00	5000000	5000000000	35.00	0.60%	33.33	5.00	15.00%	18.00%	27.00%	27.00%	27.00%	27.00%	27.00%	27.00%
GT	Series	1239	Company F	USA	NYSE	Common	600.00	610.00	590.00	605.00	6000000	6000000000	40.00	0.50%	40.00	6.00	15.00%	20.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%
GT	Series	1240	Company G	USA	NYSE	Common	700.00	710.00	690.00	705.00	7000000	7000000000	45.00	0.40%	47.50	7.00	15.00%	22.00%	33.00%	33.00%	33.00%	33.00%	33.00%	33.00%
GT	Series	1241	Company H	USA	NYSE	Common	800.00	810.00	790.00	805.00	8000000	8000000000	50.00	0.30%	55.00	8.00	15.00%	24.00%	36.00%	36.00%	36.00%	36.00%	36.00%	36.00%
GT	Series	1242	Company I	USA	NYSE	Common	900.00	910.00	890.00	905.00	9000000	9000000000	55.00	0.20%	63.00	9.00	15.00%	26.00%	39.00%	39.00%	39.00%	39.00%	39.00%	39.00%
GT	Series	1243	Company J	USA	NYSE	Common	1000.00	1010.00	990.00	1005.00	10000000	10000000000	60.00	0.10%	70.00	10.00	15.00%	28.00%	42.00%	42.00%	42.00%	42.00%	42.00%	42.00%
GT	Series	1244	Company K	USA	NYSE	Common	1100.00	1110.00	1090.00	1105.00	11000000	11000000000	65.00	0.00%	77.00	11.00	15.00%	30.00%	45.00%	45.00%	45.00%	45.00%	45.00%	45.00%
GT	Series	1245	Company L	USA	NYSE	Common	1200.00	1210.00	1190.00	1205.00	12000000	12000000000	70.00	0.00%	84.00	12.00	15.00%	32.00%	48.00%	48.00%	48.00%	48.00%	48.00%	48.00%
GT	Series	1246	Company M	USA	NYSE	Common	1300.00	1310.00	1290.00	1305.00	13000000	13000000000	75.00	0.00%	91.00	13.00	15.00%	34.00%	51.00%	51.00%	51.00%	51.00%	51.00%	51.00%
GT	Series	1247	Company N	USA	NYSE	Common	1400.00	1410.00	1390.00	1405.00	14000000	14000000000	80.00	0.00%	98.00	14.00	15.00%	36.00%	54.00%	54.00%	54.00%	54.00%	54.00%	54.00%
GT	Series	1248	Company O	USA	NYSE	Common	1500.00	1510.00	1490.00	1505.00	15000000	15000000000	85.00	0.00%	105.00	15.00	15.00%	38.00%	57.00%	57.00%	57.00%	57.00%	57.00%	57.00%
GT	Series	1249	Company P	USA	NYSE	Common	1600.00	1610.00	1590.00	1605.00	16000000	16000000000	90.00	0.00%	112.00	16.00	15.00%	40.00%	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%
GT	Series	1250	Company Q	USA	NYSE	Common	1700.00	1710.00	1690.00	1705.00	17000000	17000000000	95.00	0.00%	119.00	17.00	15.00%	42.00%	63.00%	63.00%	63.00%	63.00%	63.00%	63.00%
GT	Series	1251	Company R	USA	NYSE	Common	1800.00	1810.00	1790.00	1805.00	18000000	18000000000	100.00	0.00%	126.00	18.00	15.00%	44.00%	66.00%	66.00%	66.00%	66.00%	66.00%	66.00%
GT	Series	1252	Company S	USA	NYSE	Common	1900.00	1910.00	1890.00	1905.00	19000000	19000000000	105.00	0.00%	133.00	19.00	15.00%	46.00%	69.00%	69.00%	69.00%	69.00%	69.00%	69.00%
GT	Series	1253	Company T	USA	NYSE	Common	2000.00	2010.00	1990.00	2005.00	20000000	20000000000	110.00	0.00%	140.00	20.00	15.00%	48.00%	72.00%	72.00%	72.00%	72.00%	72.00%	72.00%
GT	Series	1254	Company U	USA	NYSE	Common	2100.00	2110.00	2090.00	2105.00	21000000	21000000000	115.00	0.00%	147.00	21.00	15.00%	50.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%
GT	Series	1255	Company V	USA	NYSE	Common	2200.00	2210.00	2190.00	2205.00	22000000	22000000000	120.00	0.00%	154.00	22.00	15.00%	52.00%	78.00%	78.00%	78.00%	78.00%	78.00%	78.00%
GT	Series	1256	Company W	USA	NYSE	Common	2300.00	2310.00	2290.00	2305.00	23000000	23000000000	125.00	0.00%	161.00	23.00	15.00%	54.00%	81.00%	81.00%	81.00%	81.00%	81.00%	81.00%
GT	Series	1257	Company X	USA	NYSE	Common	2400.00	2410.00	2390.00	2405.00	24000000	24000000000	130.00	0.00%	168.00	24.00	15.00%	56.00%	84.00%	84.00%	84.00%	84.00%	84.00%	84.00%
GT	Series	1258	Company Y	USA	NYSE	Common	2500.00	2510.00	2490.00	2505.00	25000000	25000000000	135.00	0.00%	175.00	25.00	15.00%	58.00%	87.00%	87.00%	87.00%	87.00%	87.00%	87.00%
GT	Series	1259	Company Z	USA	NYSE	Common	2600.00	2610.00	2590.00	2605.00	26000000	26000000000	140.00	0.00%	182.00	26.00	15.00%	60.00%	90.00%	90.00%	90.00%	90.00%	90.00%	90.00%
GT	Series	1260	Company AA	USA	NYSE	Common	2700.00	2710.00	2690.00	2705.00	27000000	27000000000	145.00	0.00%	189.00	27.00	15.00%	62.00%	93.00%	93.00%	93.00%	93.00%	93.00%	93.00%
GT	Series	1261	Company AB	USA	NYSE	Common	2800.00	2810.00	2790.00	2805.00	28000000	28000000000	150.00	0.00%	196.00	28.00	15.00%	64.00%	96.00%	96.00%	96.00%	96.00%	96.00%	96.00%
GT	Series	1262	Company AC	USA	NYSE	Common	2900.00	2910.00	2890.00	2905.00	29000000	29000000000	155.00	0.00%	203.00	29.00	15.00%	66.00%	99.00%	99.00%	99.00%	99.00%	99.00%	99.00%
GT	Series	1263	Company AD	USA	NYSE	Common	3000.00	3010.00	2990.00	3005.00	30000000	30000000000	160.00	0.00%	210.00	30.00	15.00%	68.00%	102.00%	102.00%	102.00%	102.00%	102.00%	102.00%
GT	Series	1264	Company AE	USA	NYSE	Common	3100.00	3110.00	3090.00	3105.00	31000000	31000000000	165.00	0.00%	217.00	31.00	15.00%	70.00%	105.00%	105.00%	105.00%	105.00%	105.00%	105.00%
GT	Series	1265	Company AF	USA	NYSE	Common	3200.00	3210.00	3190.00	3205.00	32000000	32000000000	170.00	0.00%	224.00	32.00	15.00%	72.00%	108.00%	108.00%	108.00%	108.00%	108.00%	108.00%
GT	Series	1266	Company AG	USA	NYSE	Common	3300.00	3310.00	3290.00	3305.00	33000000	33000000000	175.00	0.00%	231.00	33.00	15.00%	74.00%	111.00%	111.00%	111.00%	111.00%	111.00%	111.00%
GT	Series	1267	Company AH	USA	NYSE	Common	3400.00	3410.00	3390.00	3405.00	34000000	34000000000	180.00	0.00%	238.00	34.00	15.00%	76.00%	114.00%	114.00%	114.00%	114.00%	114.00%	114.00%
GT	Series	1268	Company AI	USA	NYSE	Common	3500.00	3510.00	3490.00	3505.00	35000000	35000000000	185.00	0.00%	245.00	35.00	15.00%	78.00%	117.00%	117.00%	117.00%	117.00%	117.00%	117.00%
GT	Series	1269	Company AJ	USA	NYSE	Common	3600.00	3610.00	3590.00	3605.00	36000000	36000000000	190.00	0.00%	252.00	36.00	15.00%	80.00%	120.00%	120.00%	120.00%	120.00%	120.00%	120.00%
GT	Series	1270	Company AK	USA	NYSE	Common	3700.00	3710.00	3690.00	3705.00	37000000	37000000000	195.00	0.00%	259.00	37.00	15.00%	82.00%	123.00%	123.00%	123.00%	123.00%	123.00%	123.00%
GT	Series	1271	Company AL	USA	NYSE	Common	3800.00	3810.00	3790.00	3805.00	38000000	38000000000	200.00	0.00%	266.00	38.00	15.00%	84.00%	126.00%	126.00%	126.00%	126.00%	126.00%	126.00%
GT	Series	1272	Company AM	USA	NYSE	Common	3900.00	3910.00	3890.00	3905.00	39000000	39000000000	205.00	0.00%	273.00	39.00	15.00%	86.00%	129.00%	129.00%	129.00%	129.00%	129.00%	129.00%
GT	Series	1273	Company AN	USA	NYSE	Common	4000.00	4010.00	3990.00	4005.00	40000000	40000000000	210.00	0.00%	280.00	40.00	15.00%	88.00%	132.00%	132.00%	132.00%	132.00%	132.00%	132.00%
GT	Series	1274	Company AO	USA	NYSE	Common	4100.00	4110.00	4090.00	4105.00	41000000	41000000000	215.00	0.00%	287.00	41.00	15.00%	90.00%	135.00%	135.00%	135.00%	135.00%	135.00%	135.00%
GT	Series	1275	Company AP	USA	NYSE	Common	4200.00	4210.00	4190.00	4205.00	42000000	42000000000	220.00	0.00%	294.00	42.00	15.00%	92.00%	138.00%	138.00%	138.00%	138.00%	138.00%	138.00%
GT	Series	1276	Company AQ	USA	NYSE	Common	4300.00	4310.00	4290.00	4305.00	43000000	43000000000	225.00	0.00%	301.00	43.00	15.00%	94.00%	141.00%	141.00%	141.00%	141.00%	141.00%	141.00%
GT	Series	1277	Company AR	USA	NYSE	Common	4400.00	4410.00	4390.00	4405.00	44000000	44000000000	230.00	0.00%	308.00	44.00	15.00%	96.00%	144.00%	144.00%	144.00%	144.00%	144.00%	144.00%
GT	Series	1278	Company AS	USA	NYSE																			

GO ID	GO ACCESSION	GO Term	p-value	Count in Selection	% Count in Selection	Count in Total	% Count in Total
11776	GO:0019825	oxygen binding	0.00	22	3.7225041	389	1.1234008
3048	GO:0004364	glutathione transferase activ	0.00	9	1.5228426	84	0.24258527
25094	GO:0050789 GO:0050791	regulation of biological proce	0.00	108	18.27411	4315	12.461374
11931	GO:0020037	heme binding	0.00	24	4.0609136	550	1.5883559
3872	GO:0005506	iron ion binding	0.00	24	4.0609136	563	1.6258988
28364	GO:0065007	biological regulation	0.00	108	18.27411	4376	12.637537
25098	GO:0050794 GO:0051244	regulation of cellular process	0.00	100	16.920473	3987	11.514136
11224	GO:0019222	regulation of metabolic proce	0.00	81	13.705584	3115	8.995871
4530	GO:0006355 GO:0032583	regulation of transcription, D	0.00	70	11.844332	2591	7.4826
25544	GO:0051252	regulation of RNA metabolic	0.00	70	11.844332	2593	7.488376
22409	GO:0046906	tetrapyrrole binding	0.00	24	4.0609136	596	1.7212002
32213	GO:2000112	regulation of cellular macromol	0.00	70	11.844332	2605	7.523031
13756	GO:0031326	regulation of cellular biosynt	0.00	70	11.844332	2605	7.523031
7141	GO:0009889	regulation of biosynthetic pro	0.00	70	11.844332	2605	7.523031
7772	GO:0010556	regulation of macromolecule	0.00	70	11.844332	2605	7.523031
7692	GO:0010468	regulation of gene expressio	0.00	70	11.844332	2635	7.6096687
19590	GO:0043295	glutathione binding	0.00	5	0.8460237	31	0.08952551
7074	GO:0009815	1-aminocyclopropane-1-carb	0.00	6	1.0152284	49	0.14150807
27228	GO:0060255	regulation of macromolecule	0.00	70	11.844332	2660	7.6818666
13753	GO:0031323	regulation of cellular metabo	0.00	72	12.182741	2770	7.999538
25468	GO:0051171	regulation of nitrogen compo	0.00	70	11.844332	2675	7.7251854
11221	GO:0019219	regulation of nucleobase, nu	0.00	70	11.844332	2675	7.7251854
31465	GO:0090090	regulation of primary metabo	0.00	70	11.844332	2710	7.826263
19479	GO:0043176	amine binding	0.00	7	1.1844332	80	0.2310336
9682	GO:0016597	amino acid binding	0.00	7	1.1844332	80	0.2310336
30700	GO:0072341	modified amino acid binding	0.00	6	1.0152284	59	0.17038727
2986	GO:0004252	serine-type endopeptidase a	0.00	9	1.5228426	144	0.41586044
6888	GO:0009611 GO:0002245	response to wounding	0.00	6	1.0152284	66	0.1906027
9722	GO:0016641	oxidoreductase activity, actir	0.00	6	1.0152284	69	0.19926646
5766	GO:0008236	serine-type peptidase activi	0.00	11	1.8612521	214	0.6180149
4641	GO:0006508	proteolysis	0.00	30	5.0761423	965	2.7868426
13829	GO:0031406	carboxylic acid binding	0.00	7	1.1844332	98	0.28301615
10103	GO:0017171	serine hydrolase activity	0.00	11	1.8612521	220	0.63534236
9768	GO:0016706	oxidoreductase activity, actir	0.00	9	1.5228426	175	0.505386
9719	GO:0016638	oxidoreductase activity, actir	0.00	6	1.0152284	89	0.25702485
9767	GO:0016705	oxidoreductase activity, actir	0.00	13	2.1996615	329	0.95012563
9818	GO:0016765 GO:0016766	transferase activity, transferr	0.00	9	1.5228426	185	0.53426516
5704	GO:0008150 GO:0000040	biological process	0.01	409	69.204735	22215	64.155138
20342	GO:0044092	negative regulation of molec	0.01	9	1.5228426	188	0.54292893
19393	GO:0043086	negative regulation of cataly	0.01	9	1.5228426	189	0.54292893
22375	GO:0046872	metal ion binding	0.01	69	11.675127	2985	8.6204405
19470	GO:0043167	ion binding	0.01	69	11.675127	2997	8.655096
19472	GO:0043169	cation binding	0.01	69	11.675127	2997	8.655096
716	GO:0001071	nucleic acid binding transcrip	0.01	37	6.2605753	1417	4.0921826
2643	GO:0003700 GO:0000130	sequence-specific DNA bind	0.01	37	6.2605753	1417	4.0921826
3356	GO:0004737	pyruvate decarboxylase acti	0.01	2	0.33840948	8	0.023103588
9600	GO:0016491	oxidoreductase activity	0.01	43	7.2758036	1724	4.9787736
5097	GO:0007049	cell cycle	0.01	4	0.67681897	52	0.15017183
5678	GO:0008113 GO:0033742	peptide-methionine-(S)-S-ox	0.01	2	0.33840948	10	0.0288792
4526	GO:0006351 GO:0006350	transcription, DNA-dependen	0.01	39	6.5989847	1575	4.548474
15176	GO:0032774	RNA biosynthetic process	0.01	39	6.5989847	1575	4.548474
2870	GO:0004064	arylesterase activity	0.01	3	0.5076142	30	0.086637594
13809	GO:0031386	protein tag	0.01	2	0.33840948	11	0.03176712
26959	GO:0055114	oxidation-reduction process	0.01	57	9.6446705	2490	7.1909204
5715	GO:0008171	O-methyltransferase activity	0.02	4	0.67681897	57	0.16461143
12516	GO:0022804	active transmembrane transp	0.02	22	3.7225041	787	2.2727928
3464	GO:0004857	enzyme inhibitor activity	0.02	7	1.1844332	95	0.4534034
18633	GO:0042277	peptide binding	0.02	5	0.8460237	157	0.4534034
3318	GO:0004693 GO:0016537	cyclin-dependent protein kin	0.03	3	0.5076142	37	0.10685303
12805	GO:0030246	carbohydrate binding	0.03	9	1.5228426	251	0.7248679
3801	GO:0005342	organic acid transmembrane	0.03	6	1.0152284	136	0.3927571
22444	GO:0046943	carboxylic acid transmembrane	0.03	6	1.0152284	136	0.3927571
13435	GO:0030976	thiamine pyrophosphate bind	0.03	2	0.33840948	16	0.046206716
18757	GO:0042409	caffeoyl-CoA O-methyltrans	0.03	2	0.33840948	16	0.046206716
22412	GO:0046910	pectinesterase inhibitor activ	0.03	2	0.33840948	16	0.046206716
22415	GO:0046914	transition metal ion binding	0.03	57	9.6446705	2599	7.5057034
18738	GO:0042389	omega-3 fatty acid desaturat	0.03	2	0.33840948	17	0.049094636
3719	GO:0005201	extracellular matrix structura	0.03	1	0.16920474	2	0.00577584
5907	GO:0008413	8-oxo-7,8-dihydroguanosine	0.03	1	0.16920474	2	0.00577584
7409	GO:0010177	2-[2-(methylthio)ethyl]malate	0.03	1	0.16920474	2	0.00577584
7470	GO:0010241	ent-kaurene oxidation to kau	0.03	1	0.16920474	2	0.00577584
8509	GO:0015093	ferrous iron transmembrane	0.03	1	0.16920474	2	0.00577584
8612	GO:0015204 GO:0015287	urea transmembrane transp	0.03	1	0.16920474	2	0.00577584
8953	GO:0015684	ferrous iron transport	0.03	1	0.16920474	2	0.00577584
9106	GO:0015840	urea transport	0.03	1	0.16920474	2	0.00577584
11186	GO:0019177	dihydroneopterin triphosphat	0.03	1	0.16920474	2	0.00577584
15726	GO:0033331	ent-kaurene metabolic proce	0.03	1	0.16920474	2	0.00577584
19204	GO:0042887	amide transmembrane transp	0.03	1	0.16920474	2	0.00577584
30280	GO:0071918	urea transmembrane transp	0.03	1	0.16920474	2	0.00577584
10899	GO:0018858	benzoate-CoA ligase activity	0.04	2	0.33840948	18	0.051982556
22917	GO:0047429	nucleoside-triphosphate diph	0.04	2	0.33840948	18	0.051982556
31431	GO:0080054	low affinity nitrate transmem	0.04	3	0.5076142	45	0.1299564
2975	GO:0004175 GO:0016809	endopeptidase activity	0.05	10	1.6920474	320	0.9241344
19758	GO:0043492	ATPase activity, coupled to	0.05	8	1.3536379	235	0.67866117
5921	GO:0008428	ribonuclease inhibitor activity	0.05	1	0.16920474	3	0.00866376
11784	GO:0019838	growth factor binding	0.05	3	0.5076142	49	0.14150807
31421	GO:0080044	quercetin 7-O-glucosyltransf	0.05	3	0.5076142	49	0.14150807
3874	GO:0005509	calcium ion binding	0.05	9	1.5228426	279	0.8057296
9114	GO:0015849	organic acid transport	0.05	6	1.0152284	156	0.45051548
22443	GO:0046942	carboxylic acid transport	0.05	6	1.0152284	156	0.45051548
8584	GO:0015171 GO:0015359	amino acid transmembrane	0.05	5	0.8460237	118	0.34077454
2521	GO:0003333	amino acid transmembrane	0.05	5	0.8460237	118	0.34077454
8489	GO:0015066	alpha-amylase inhibitor activ	0.05	2	0.33840948	22	0.06353424
12608	GO:0030001	metal ion transport	0.06	11	1.8612521	374	1.080082
9806	GO:0016752	sinapoyltransferase activity	0.06	2	0.33840948	23	0.06642216
9807	GO:0016753	O-sinapoyltransferase activi	0.06	2	0.33840948	23	0.06642216
9808	GO:0016754	sinapoylglucosyl-malate O-si	0.06	2	0.33840948	23	0.06642216
4951	GO:0006865 GO:0006866	amino acid transport	0.06	5	0.8460237	123	0.35521415
19473	GO:0043170 GO:0043283	macromolecule metabolic pr	0.06	127	21.489002	6553	18.92454
8559	GO:0015146	pentose transmembrane tra	0.06	2	0.33840948	24	0.06931008
8561	GO:0015148	D-xylose transmembrane tra	0.06	2	0.33840948	24	0.06931008
8829	GO:0015519	D-xylose:hydrogen symporte	0.06	2	0.33840948	24	0.06931008
9019	GO:0015750	pentose transport	0.06	2	0.33840948	24	0.06931008
9022	GO:0015753	D-xylose transport	0.06	2	0.33840948	24	0.06931008
5702	GO:0008146	sulfotransferase activity	0.06	3	0.5076142	54	0.15594767
3761	GO:0005275 GO:0005279	amine transmembrane trans	0.07	5	0.8460237	126	0.3638779
11522	GO:0019538 GO:0006411	protein metabolic process	0.07	83	14.043993	4134	11.938661
4039	GO:0005751 GO:0005752	mitochondrial respiratory cha	0.07	1	0.16920474	4	0.011551679
7511	GO:0010285 GO:0043742	L,L-diaminopimelate aminot	0.07	1	0.16920474	4	0.011551679
8584	GO:0015184	L-cystine transmembrane tra	0.07	1	0.16920474	4	0.011551679
9080	GO:0015811	L-cystine transport	0.07	1	0.16920474	4	0.011551679
20901	GO:0045277 GO:0045287	respiratory chain complex IV	0.07	1	0.16920474	4	0.011551679
21300	GO:0045703	ketoreductase activity	0.07	1	0.16920474	4	0.011551679
31418	GO:0080041	ADP-ribose pyrophosphat	0.07	1	0.16920474	4	0.011551679
31507	GO:0080132	fatty acid alpha-hydroxylase	0.07	1	0.16920474	4	0.011551679

75	GO:000099	sulfur amino acid transmembrane transport	0.07	1	0.16920474	4	0.011551679
77	GO:0000101	sulfur amino acid transport	0.07	1	0.16920474	4	0.011551679
21145	GO:0045543	gibberellin 2-beta-dioxigenase activity	0.07	2	0.33840948	25	0.072197996
18956	GO:0042626	ATPase activity, coupled to transmembrane transport	0.07	7	1.1844332	211	0.6093511
17024	GO:0034645 GO:0034961	cellular macromolecule biosynthesis	0.07	43	7.2758036	1999	5.7729516
30066	GO:0071702	organic substance transport	0.07	14	2.3688664	529	1.5277096
9744	GO:0016671	oxidoreductase activity, acting on NADPH and reduced flavin mononucleotide	0.07	2	0.33840948	26	0.075085916
9861	GO:0016820	hydrolase activity, acting on ester bonds	0.07	7	1.1844332	212	0.612239
6428	GO:0009059 GO:0043284	macromolecule biosynthesis	0.07	43	7.2758036	2003	5.7845035
9308	GO:0016070	RNA metabolic process	0.08	40	6.7681894	1855	5.3570914
8749	GO:0015399	primary active transmembrane transport	0.08	8	1.3536379	260	0.75085914
8753	GO:0015405	P-P-bond-hydrolysis-driven transmembrane transport	0.08	8	1.3536379	260	0.75085914
17617	GO:0035251	UDP-glucosyltransferase activity	0.08	7	1.1844332	218	0.62956655
9103	GO:0015837	amine transport	0.08	5	0.8460237	135	0.38986918
14850	GO:0032442	phenylcoumaran benzylic ether synthase activity	0.08	1	0.16920474	5	0.0144396
21949	GO:0046424	ferulate 5-hydroxylase activity	0.08	1	0.16920474	5	0.0144396
11787	GO:0019842	vitamin binding	0.08	6	1.0152284	177	0.5111618
8526	GO:0015112	nitrate transmembrane transport	0.09	3	0.5076142	61	0.1761631
8975	GO:0015706 GO:0006872	nitrate transport	0.09	3	0.5076142	61	0.1761631
16430	GO:0034046	poly(G) RNA binding	0.09	4	0.67681897	100	0.28879198
3603	GO:0005030	neurotrophin receptor activity	0.09	2	0.33840948	30	0.086637594
6216	GO:0008810	cellulase activity	0.09	2	0.33840948	30	0.086637594
19425	GO:0043121	neurotrophin binding	0.09	2	0.33840948	30	0.086637594
22049	GO:0046527	glucosyltransferase activity	0.09	8	1.3536379	270	0.77973837
25820	GO:0051536	iron-sulfur cluster binding	0.10	3	0.5076142	64	0.18482687
25824	GO:0051540	metal cluster binding	0.10	3	0.5076142	64	0.18482687
3197	GO:0004550	nucleoside diphosphate kinase activity	0.10	1	0.16920474	6	0.01732752
3413	GO:0004802	transketolase activity	0.10	1	0.16920474	6	0.01732752
4375	GO:0006165	nucleoside diphosphate phosphorylation	0.10	1	0.16920474	6	0.01732752
7250	GO:0010012	steroid 22-alpha hydroxylase activity	0.10	1	0.16920474	6	0.01732752
9333	GO:0016101	diterpenoid metabolic process	0.10	1	0.16920474	6	0.01732752
9772	GO:0016710	trans-cinnamate 4-monooxygenase activity	0.10	1	0.16920474	6	0.01732752
19203	GO:0042886	amide transport	0.10	1	0.16920474	6	0.01732752
30707	GO:0072348	sulfur compound transport	0.10	1	0.16920474	6	0.01732752
2702	GO:0003852	2-isopropylmalate synthase activity	0.10	1	0.16920474	6	0.01732752
2713	GO:0003863	3-methyl-2-oxobutanoate decarboxylase activity	0.10	1	0.16920474	6	0.01732752
3073	GO:0004397	histidine ammonia-lyase activity	0.10	1	0.16920474	6	0.01732752
5732	GO:0008194	UDP-glucosyltransferase activity	0.10	9	1.5228426	322	0.9299102
21041	GO:0045431	flavonol synthase activity	0.10	2	0.33840948	32	0.09241343
25836	GO:0051552	flavone metabolic process	0.10	2	0.33840948	32	0.09241343
25837	GO:0051553	flavone biosynthetic process	0.10	2	0.33840948	32	0.09241343
25838	GO:0051554	flavonol metabolic process	0.10	2	0.33840948	32	0.09241343
25839	GO:0051555	flavonol biosynthetic process	0.10	2	0.33840948	32	0.09241343
3473	GO:0004867	serine-type endopeptidase inhibitor activity	0.10	3	0.5076142	66	0.1906027
23515	GO:0048037	cofactor binding	0.11	9	1.5228426	327	0.94434977
24968	GO:0050662	coenzyme binding	0.11	6	1.0152284	191	0.5515927
7691	GO:0010467	gene expression	0.11	41	6.937394	1974	5.7007537
5114	GO:0007067	mitosis	0.11	1	0.16920474	7	0.020215439
16115	GO:0033729	anthocyanidin reductase activity	0.11	1	0.16920474	7	0.020215439
21149	GO:0045548	phenylalanine ammonia-lyase activity	0.11	1	0.16920474	7	0.020215439
23710	GO:0048285	organelle fission	0.11	1	0.16920474	7	0.020215439
64	GO:0000087	M phase of mitotic cell cycle	0.11	1	0.16920474	7	0.020215439
213	GO:0000279	M phase	0.11	1	0.16920474	7	0.020215439
214	GO:0000280	nuclear division	0.11	1	0.16920474	7	0.020215439
31420	GO:0080043	quercetin 3-O-glucosyltransferase activity	0.11	3	0.5076142	69	0.19926646
7690	GO:0010466	negative regulation of peptidase activity	0.12	4	0.67681897	110	0.31767118
12946	GO:0030414	peptidase inhibitor activity	0.12	4	0.67681897	110	0.31767118
25636	GO:0051346	negative regulation of hydrolytic enzyme activity	0.12	4	0.67681897	110	0.31767118
8679	GO:0015297	antiporter activity	0.12	5	0.8460237	152	0.4389638
8682	GO:0015300	solute:solute antiporter activity	0.12	5	0.8460237	152	0.4389638
21146	GO:0045544	gibberellin 20-oxidase activity	0.12	2	0.33840948	35	0.10107719
9740	GO:0016667	oxidoreductase activity, acting on NADPH and reduced flavin mononucleotide	0.13	3	0.5076142	72	0.20793022
26711	GO:0052547	regulation of peptidase activity	0.13	4	0.67681897	112	0.32344702
28100	GO:0061134	peptidase regulator activity	0.13	4	0.67681897	112	0.32344702
29081	GO:0070717	poly-purine tract binding	0.13	4	0.67681897	112	0.32344702
8739	GO:0015385 GO:0015502	sodium:hydrogen antiporter activity	0.13	2	0.33840948	36	0.10396511
3402	GO:0004791	thioredoxin-disulfide reductase activity	0.13	1	0.16920474	8	0.023103358
3803	GO:0005344 GO:0015033	oxygen transporter activity	0.13	1	0.16920474	8	0.023103358
4035	GO:0005746	mitochondrial respiratory chain complex assembly	0.13	1	0.16920474	8	0.023103358
6497	GO:0009132	nucleoside diphosphate metabolism	0.13	1	0.16920474	8	0.023103358
7003	GO:0009737	response to abscisic acid stimulus	0.13	1	0.16920474	8	0.023103358
7843	GO:0010628	positive regulation of gene expression	0.13	1	0.16920474	8	0.023103358
8725	GO:0015367	oxoglutarate:malate antiporter activity	0.13	1	0.16920474	8	0.023103358
8940	GO:0015669	gas transport	0.13	1	0.16920474	8	0.023103358
8942	GO:0015671	oxygen transport	0.13	1	0.16920474	8	0.023103358
9011	GO:0015742	alpha-ketoglutarate transporter activity	0.13	1	0.16920474	8	0.023103358
9680	GO:0016595	glutamate binding	0.13	1	0.16920474	8	0.023103358
21461	GO:0045893 GO:0043193 GO:0005344	positive regulation of transcription	0.13	1	0.16920474	8	0.023103358
22702	GO:0047209	coniferyl-alcohol glucosyltransferase activity	0.13	1	0.16920474	8	0.023103358
28833	GO:0070469	respiratory chain	0.13	1	0.16920474	8	0.023103358
30696	GO:0072337	modified amino acid transport	0.13	1	0.16920474	8	0.023103358
30708	GO:0072349	modified amino acid transmembrane transport	0.13	1	0.16920474	8	0.023103358
3022	GO:0004338	glucan exo-1,3-beta-glucosyltransferase activity, transfer of glucuronic acid	0.13	1	0.16920474	8	0.023103358
9832	GO:0016782	transferase activity, transfer of phosphate group	0.13	3	0.5076142	74	0.21370606
30069	GO:0071705	nitrogen compound transport	0.13	6	1.0152284	202	0.5833598
26845	GO:0052689	carboxylic ester hydrolase activity	0.13	13	2.1996615	538	1.5537009
9637	GO:0016538 GO:0003751 GO:0005344	cyclin-dependent protein kinase activity	0.14	2	0.33840948	38	0.10974095
24966	GO:0050660	flavin adenine dinucleotide binding	0.14	4	0.67681897	118	0.34077454
7225	GO:0009978	allene oxide synthase activity	0.14	1	0.16920474	9	0.025991278
13224	GO:0030755	quercetin 3-O-methyltransferase activity	0.14	1	0.16920474	9	0.025991278
19342	GO:0043027	caspace inhibitor activity	0.14	1	0.16920474	9	0.025991278
19343	GO:0043028	caspace regulator activity	0.14	1	0.16920474	9	0.025991278
19458	GO:0043154 GO:0001719	negative regulation of caspace activity	0.14	1	0.16920474	9	0.025991278
19579	GO:0043281 GO:0043026	regulation of caspace activity	0.14	1	0.16920474	9	0.025991278
5891	GO:0008395 GO:0008394	steroid hydroxylase activity	0.15	2	0.33840948	40	0.1155168
7072	GO:0009813	flavonoid biosynthetic process	0.15	2	0.33840948	40	0.1155168
21058	GO:0045454 GO:0030503 GO:0005344	cell redox homeostasis	0.15	6	1.0152284	211	0.6093511
3856	GO:0005471 GO:0005349	ATP:ADP antiporter activity	0.16	1	0.16920474	10	0.0288792
4878	GO:0006772	thiamine metabolic process	0.16	1	0.16920474	10	0.0288792
6592	GO:0009228	thiamine biosynthetic process	0.16	1	0.16920474	10	0.0288792
7175	GO:0009924	octadecanal decarboxylase activity	0.16	1	0.16920474	10	0.0288792
9741	GO:0016668 GO:0016654	oxidoreductase activity, acting on NADPH and reduced flavin mononucleotide	0.16	1	0.16920474	10	0.0288792
26022	GO:0051740	ethylene binding	0.16	1	0.16920474	10	0.0288792
30135	GO:0071771	aldehyde decarboxylase activity	0.16	1	0.16920474	10	0.0288792
30687	GO:0072328	alkene binding	0.16	1	0.16920474	10	0.0288792
22376	GO:0046873	metal ion transmembrane transport	0.16	6	1.0152284	213	0.6151269
3718	GO:0005200	structural constituent of cytoskeleton	0.16	2	0.33840948	42	0.121292636
4911	GO:0006812 GO:0006819 GO:0005344	cation transport	0.16	15	2.5380712	662	1.9118029
9849	GO:0016803	ether hydrolase activity	0.17	1	0.16920474	11	0.03176712
12469	GO:0022402	cell cycle process	0.17	1	0.16920474	11	0.03176712
12470	GO:0022403	cell cycle phase	0.17	1	0.16920474	11	0.03176712
16183	GO:0033799	myricetin 3-O-methyltransferase activity	0.17	1	0.16920474	11	0.03176712
212	GO:0000278	mitotic cell cycle	0.17	1	0.16920474	11	0.03176712
2989	GO:0004301	epoxide hydrolase activity	0.17	1	0.16920474	11	0.03176712
7071	GO:0009812	flavonoid metabolic process	0.17	2	0.33840948	44	0.12706847
3476	GO:0004872 GO:0019041	receptor activity	0.18	15	2.5380712	672	1.9406822
8666	GO:0015276	ligand-gated ion channel activity	0.18	2	0.33840948	45	0.1299564
12530	GO:0022834	ligand-gated channel activity	0.18	2	0.33840948	45	0.1299564
4786	GO:0006664	glycolipid metabolic process	0.19	1	0.16920474	12	0.03465504
6610	GO:0009247	glycolipid biosynthetic process	0.19	1	0.16920474	12	0.03465504
7526	GO:0010301 GO:0033710	xanthoxin dehydrogenase activity	0.19	1	0.16920474	12	0.03465504
9704	GO:0016621	cinnamoyl-CoA reductase activity	0.19	1	0.16920474	12	0.03465504

14848	GO:0032440	2-alkenal reductase activity	0.19	1	0.16920474	12	0.03465504
19047	GO:0042723	thiamine-containing compou	0.19	1	0.16920474	12	0.03465504
19048	GO:0042724	thiamine-containing compou	0.19	1	0.16920474	12	0.03465504
21503	GO:0045935	positive regulation of nucleot	0.19	1	0.16920474	12	0.03465504
21992	GO:0046467	membrane lipid biosynthetic	0.19	1	0.16920474	12	0.03465504
25470	GO:0051173	positive regulation of nitroge	0.19	1	0.16920474	12	0.03465504
25546	GO:0051254	positive regulation of RNA m	0.19	1	0.16920474	12	0.03465504
6427	GO:0009058	biosynthetic process	0.19	54	9.137055	2796	8.074624
4032	GO:0005743	mitochondrial inner membra	0.19	3	0.5076142	88	0.25413695
3475	GO:0004871 GO:0005062 GO	signal transducer activity	0.19	17	2.8764806	787	2.2727928
27063	GO:0060089	molecular transducer activity	0.19	17	2.8764806	787	2.2727928
12547	GO:0022857 GO:0005386 GO	transmembrane transporter	0.19	30	5.0761423	1483	4.282785
4990	GO:0006915 GO:0008632	apoptosis	0.19	6	1.0152284	227	0.6555578
21331	GO:0045735	nutrient reservoir activity	0.19	3	0.5076142	89	0.25702485
3449	GO:0004842 GO:0004840 GO	ubiquitin-protein ligase activi	0.19	8	1.3536379	326	0.94146186
7551	GO:0010327	acetyl CoA:(Z)-3-hexen-1-ol	0.20	1	0.16920474	13	0.037542958
8149	GO:0010941	regulation of cell death	0.20	1	0.16920474	13	0.037542958
13443	GO:0030984	kininogen binding	0.20	1	0.16920474	13	0.037542958
19298	GO:0042981	regulation of apoptosis	0.20	1	0.16920474	13	0.037542958
19381	GO:0043067 GO:0043070	regulation of programmed ce	0.20	1	0.16920474	13	0.037542958
25095	GO:0050790	regulation of catalytic activity	0.20	11	1.8612521	490	1.3862015
4909	GO:0006810 GO:0015457 GO	transport	0.20	45	7.614213	2315	6.6855345
25529	GO:0051234	establishment of localization	0.20	45	7.614213	2315	6.6855345
3844	GO:0005451	monovalent cation:hydrogen	0.20	2	0.33840948	49	0.14150807
6483	GO:0009116	nucleoside metabolic proces	0.20	2	0.33840948	49	0.14150807
25476	GO:0051179	localization	0.20	45	7.614213	2319	6.697086
28366	GO:0065009	regulation of molecular functi	0.21	11	1.8612521	484	1.3977532
9654	GO:0016567	protein ubiquitination	0.21	8	1.3536379	332	0.9587894
14854	GO:0032446	protein modification by small	0.21	8	1.3536379	332	0.9587894
29011	GO:0070647	protein modification by small	0.21	8	1.3536379	332	0.9587894
4408	GO:0006200	ATP catabolic process	0.21	14	2.3688664	641	1.8511566
9918	GO:0016887 GO:0004002	ATPase activity	0.21	14	2.3688664	641	1.8511566
21600	GO:0046034	ATP metabolic process	0.21	14	2.3688664	641	1.8511566
4910	GO:0006811	ion transport	0.21	20	3.3840947	959	2.769515
28378	GO:0070011	peptidase activity, acting on	0.21	12	2.0304568	537	1.550813
11695	GO:0019725	cellular homeostasis	0.21	6	1.0152284	234	0.67577326
5195	GO:0007165 GO:0023033	signal transduction	0.21	20	3.3840947	961	2.775291
12602	GO:0023052 GO:0023046	signaling	0.21	20	3.3840947	961	2.775291
7660	GO:0010436	carotenoid dioxygenase activi	0.21	1	0.16920474	14	0.040430877
8553	GO:0015140	malate transmembrane transp	0.21	1	0.16920474	14	0.040430877
8859	GO:0015556	C4-dicarboxylate transmembr	0.21	1	0.16920474	14	0.040430877
9009	GO:0015740	C4-dicarboxylate transport	0.21	1	0.16920474	14	0.040430877
9012	GO:0015743	malate transport	0.21	1	0.16920474	14	0.040430877
9399	GO:0016174	NAD(P)H oxidase activity	0.21	1	0.16920474	14	0.040430877
9847	GO:0016801	hydrolase activity, acting on	0.21	1	0.16920474	14	0.040430877
9879	GO:0016841	ammonia-lyase activity	0.21	1	0.16920474	14	0.040430877
11157	GO:0019144	ADP-sugar diphosphatase a	0.21	1	0.16920474	14	0.040430877
17616	GO:0035250	UDP-galactose 4-epimerase a	0.21	1	0.16920474	14	0.040430877
21150	GO:0045549	9-cis-epoxycarotenoid dioxy	0.21	1	0.16920474	14	0.040430877
24970	GO:0050664	oxidoreductase activity, actin	0.21	1	0.16920474	14	0.040430877
29787	GO:0071423	malate transmembrane trans	0.21	1	0.16920474	14	0.040430877
31408	GO:0080031	methyl salicylate esterase ac	0.21	1	0.16920474	14	0.040430877
3808	GO:0005351 GO:0005403	sugar:hydrogen symporter a	0.22	3	0.5076142	94	0.27146447
3835	GO:0005402	cation:sugar symporter activ	0.22	3	0.5076142	94	0.27146447
11803	GO:0019866	organelle inner membrane	0.22	3	0.5076142	94	0.27146447
2657	GO:0003727 GO:0003728	single-stranded RNA binding	0.22	5	0.8460237	188	0.54292893
3472	GO:0004866	endopeptidase inhibitor activ	0.22	3	0.5076142	95	0.27435237
8159	GO:0010951	negative regulation of endop	0.22	3	0.5076142	95	0.27435237
11712	GO:0019748	secondary metabolic proces	0.22	3	0.5076142	95	0.27435237
26712	GO:0052548	regulation of endopeptidase	0.22	3	0.5076142	95	0.27435237
28101	GO:0061135	endopeptidase regulator acti	0.22	3	0.5076142	95	0.27435237
6965	GO:0009699	phenylpropanoid biosynthetic	0.22	2	0.33840948	52	0.15017183
2809	GO:0003993	acid phosphatase activity	0.22	2	0.33840948	52	0.15017183
18925	GO:0042592	homeostatic process	0.22	6	1.0152284	238	0.68732494
11747	GO:0019787 GO:0008639 GO	small conjugating protein lig	0.22	8	1.3536379	339	0.9790048
5756	GO:0008219	cell death	0.23	6	1.0152284	239	0.69021285
8209	GO:0012501 GO:0016244	programmed cell death	0.23	6	1.0152284	239	0.69021285
9462	GO:0016265	death	0.23	6	1.0152284	239	0.69021285
7520	GO:0010294	abscisic acid glucosyltransfe	0.23	1	0.16920474	15	0.043318797
10079	GO:0017134	fibroblast growth factor bindi	0.23	1	0.16920474	15	0.043318797
14101	GO:0031683	G-protein beta/gamma-subu	0.23	1	0.16920474	15	0.043318797
2868	GO:0004062	aryl sulfotransferase activity	0.23	1	0.16920474	15	0.043318797
8677	GO:0015295	solute:hydrogen symporter a	0.23	3	0.5076142	98	0.28301615
8681	GO:0015299	solute:hydrogen antiporter a	0.23	3	0.5076142	98	0.28301615
20499	GO:0044249	cellular biosynthetic process	0.24	50	8.460237	2635	7.6096687
2897	GO:0004091 GO:0004302 GO	carboxylesterase activity	0.24	5	0.8460237	194	0.5602564
3382	GO:0004768 GO:0016214 GO	stearyl-CoA 9-desaturase a	0.24	1	0.16920474	16	0.046206716
3742	GO:0005242	inward rectifier potassium ch	0.24	1	0.16920474	16	0.046206716
3782	GO:0005310 GO:0005312 GO	dicarboxylic acid transmembr	0.24	1	0.16920474	16	0.046206716
3829	GO:0005381 GO:0005382 GO	iron ion transmembrane tran	0.24	1	0.16920474	16	0.046206716
4767	GO:0006643	membrane lipid metabolic pr	0.24	1	0.16920474	16	0.046206716
4928	GO:0006835 GO:0006841	dicarboxylic acid transport	0.24	1	0.16920474	16	0.046206716
7178	GO:0009927	histidine phosphotransfer kin	0.24	1	0.16920474	16	0.046206716
9386	GO:0016157	sucrose synthase activity	0.24	1	0.16920474	16	0.046206716
9427	GO:0016215	CoA desaturase activity	0.24	1	0.16920474	16	0.046206716
9878	GO:0016840	carbon-nitrogen lyase activi	0.24	1	0.16920474	16	0.046206716
17134	GO:0034755	iron ion transmembrane tran	0.24	1	0.16920474	16	0.046206716
31396	GO:0080019	fatty-acyl-CoA reductase (ak	0.24	1	0.16920474	16	0.046206716
9533	GO:0016405	CoA-ligase activity	0.24	2	0.33840948	55	0.15883559
5874	GO:0008374	O-acyltransferase activity	0.25	3	0.5076142	102	0.29456782
12794	GO:0030234	enzyme regulator activity	0.25	9	1.5228426	403	1.1638317
4446	GO:0006241	CTP biosynthetic process	0.25	1	0.16920474	17	0.049094636
6507	GO:0009142	nucleoside triphosphate bios	0.25	1	0.16920474	17	0.049094636
6513	GO:0009148	pyrimidine nucleoside triphos	0.25	1	0.16920474	17	0.049094636
6565	GO:0009201	ribonucleoside triphosphate	0.25	1	0.16920474	17	0.049094636
6572	GO:0009208	pyrimidine ribonucleoside tri	0.25	1	0.16920474	17	0.049094636
6573	GO:0009209	pyrimidine ribonucleoside tri	0.25	1	0.16920474	17	0.049094636
8585	GO:0015172	acidic amino acid transmem	0.25	1	0.16920474	17	0.049094636
9069	GO:0015800	acidic amino acid transport	0.25	1	0.16920474	17	0.049094636
21602	GO:0046036 GO:0006243	CTP metabolic process	0.25	1	0.16920474	17	0.049094636
9910	GO:0016878	acid-thiol ligase activity	0.25	2	0.33840948	57	0.16461143
4913	GO:0006814 GO:0006834 GO	sodium ion transport	0.26	2	0.33840948	58	0.16749935
8499	GO:0015081 GO:0022816	sodium ion transmembrane	0.26	2	0.33840948	58	0.16749935
8558	GO:0015145	monosaccharide transmembr	0.26	2	0.33840948	58	0.16749935
9018	GO:0015749	monosaccharide transport	0.26	2	0.33840948	58	0.16749935
11820	GO:0019887	protein kinase regulator activ	0.26	2	0.33840948	58	0.16749935
18086	GO:0035725	sodium ion transmembrane	0.26	2	0.33840948	58	0.16749935
29800	GO:0071436	sodium ion export	0.26	2	0.33840948	58	0.16749935
5763	GO:0008233	peptidase activity	0.26	12	2.0304568	565	1.6316746
4357	GO:0006139 GO:0055134	nucleobase, nucleoside, nuc	0.26	61	10.321489	3285	9.486816
8673	GO:0015291 GO:0015290 GO	secondary active transmembr	0.26	9	1.5228426	407	1.1753833
26931	GO:0055085	transmembrane transport	0.26	30	5.0761423	1548	4.4705
3832	GO:0005388	calcium-transporting ATPase	0.27	1	0.16920474	18	0.051982556
4134	GO:0005874	microtubule	0.27	1	0.16920474	18	0.051982556
4225	GO:0005985	sucrose metabolic process	0.27	1	0.16920474	18	0.051982556
7773	GO:0010557	positive regulation of macrom	0.27	1	0.16920474	18	0.051982556
12887	GO:0030332	cyclin binding	0.27	1	0.16920474	18	0.051982556
19253	GO:0042936	dipeptide transporter activity	0.27	3	0.5076142	105	0.3032316
19255	GO:0042938	dipeptide transport	0.27	3	0.5076142	105	0.3032316
3333	GO:0004712	protein serine/threonine/tyros	0.27	2	0.33840948	59	0.17038727
31895	GO:0090304	nucleic acid metabolic proces	0.27	44	7.4450083	2340	6.7577324
4840	GO:0006720 GO:0016096	isoprenoid metabolic proces	0.27	2	0.33840948	60	0.17327519

6964	GO:0009698	phenylpropanoid metabolic p	0.27	2	0.33840948	60	0.17327519
14811	GO:0032403	protein complex binding	0.27	2	0.33840948	60	0.17327519
28375	GO:0070008	serine-type exopeptidase ac	0.27	2	0.33840948	60	0.17327519
2980	GO:0004185	serine-type carboxypeptidase	0.27	2	0.33840948	60	0.17327519
3290	GO:0004656	procollagen-proline 4-dioxyg	0.28	1	0.16920474	19	0.054870475
11752	GO:0019798	procollagen-proline dioxygen	0.28	1	0.16920474	19	0.054870475
13966	GO:0031543	peptidyl-proline dioxygenase	0.28	1	0.16920474	19	0.054870475
13968	GO:0031545	peptidyl-proline 4-dioxygen	0.28	1	0.16920474	19	0.054870475
5705	GO:0008152	metabolic process	0.28	305	51.607445	17432	50.34222
4954	GO:0006869	lipid transport	0.28	5	0.8460237	208	0.6006873
8085	GO:0010876	lipid localization	0.28	5	0.8460237	208	0.6006873
20488	GO:0044238	primary metabolic process	0.28	163	27.580372	9167	26.47356
3888	GO:0005529	sugar binding	0.28	4	0.67681897	158	0.45629135
6018	GO:0008559(GO:0005226)	xenobiotic-transporting ATPa	0.29	2	0.33840948	62	0.17905103
11210	GO:0019207	kinase regulator activity	0.29	2	0.33840948	62	0.17905103
19225	GO:0042908	xenobiotic transport	0.29	2	0.33840948	62	0.17905103
19227	GO:0042910	xenobiotic transporter activit	0.29	2	0.33840948	62	0.17905103
2978	GO:0004180	carboxypeptidase activity	0.29	2	0.33840948	62	0.17905103
4921	GO:0006826(GO:0015681)	iron ion transport	0.29	1	0.16920474	20	0.0577584
9707	GO:0016624	oxidoreductase activity, actin	0.29	1	0.16920474	20	0.0577584
9799	GO:0016744(GO:0016745)	transferase activity, transfer	0.29	1	0.16920474	20	0.0577584
8680	GO:0015298	solute:cation antiporter activ	0.30	3	0.5076142	112	0.32344702
9730	GO:0016651	oxidoreductase activity, actin	0.30	3	0.5076142	112	0.32344702
3364	GO:0004745	retinol dehydrogenase activit	0.30	1	0.16920474	21	0.060646318
3474	GO:0004869(GO:0004870)	cysteine-type endopeptidase	0.30	1	0.16920474	21	0.060646318
4420	GO:0006213	pyrimidine nucleoside metab	0.30	1	0.16920474	21	0.060646318
5878	GO:0008378	galactosyltransferase activit	0.30	1	0.16920474	21	0.060646318
6582	GO:0009218	pyrimidine ribonucleotide me	0.30	1	0.16920474	21	0.060646318
6584	GO:0009220	pyrimidine ribonucleotide bio	0.30	1	0.16920474	21	0.060646318
21697	GO:0046131	pyrimidine ribonucleotide me	0.30	1	0.16920474	21	0.060646318
9933	GO:0016903	oxidoreductase activity, actin	0.30	3	0.5076142	113	0.32633495
9710	GO:0016628	oxidoreductase activity, actin	0.30	2	0.33840948	65	0.18771479
14379	GO:0031966	mitochondrial membrane	0.31	3	0.5076142	114	0.32922286
9422	GO:0016209	antioxidant activity	0.31	4	0.67681897	165	0.47650677
5840	GO:0008324	cation transmembrane transp	0.31	11	1.8612521	538	1.5537009
7143	GO:0009891	positive regulation of biosynt	0.32	1	0.16920474	22	0.06353424
8774	GO:0015431	glutathione S-conjugate-exp	0.32	1	0.16920474	22	0.06353424
10032	GO:0017075	svntaxin-1 binding	0.32	1	0.16920474	22	0.06353424
12660	GO:0030077	plasma membrane light-harv	0.32	1	0.16920474	22	0.06353424
13038	GO:0030551	cyclic nucleotide binding	0.32	1	0.16920474	22	0.06353424
13758	GO:0031328	positive regulation of cellular	0.32	1	0.16920474	22	0.06353424
18438	GO:0042054	histone methyltransferase ac	0.32	1	0.16920474	22	0.06353424
19040	GO:0042716	plasma membrane-derived c	0.32	1	0.16920474	22	0.06353424
19325	GO:0043008	ATP-dependent protein bind	0.32	1	0.16920474	22	0.06353424
30359	GO:0071997	glutathione S-conjugate-tran	0.32	1	0.16920474	22	0.06353424
4609	GO:0006464	protein modification process	0.32	51	8.629441	2781	8.031305
2674	GO:0003824	catalytic activity	0.32	189	31.979696	10750	31.045137
3986	GO:0005681	spliceosomal complex	0.33	1	0.16920474	23	0.06642216
5636	GO:0008061	chitin binding	0.33	1	0.16920474	23	0.06642216
6512	GO:0009147	pyrimidine nucleoside triphos	0.33	1	0.16920474	23	0.06642216
7527	GO:0010302	2-oxoqlutarate-dependent di	0.33	1	0.16920474	23	0.06642216
22414	GO:0046912	transferase activity, transfer	0.33	1	0.16920474	23	0.06642216
25416	GO:0051119	sugar transmembrane transp	0.33	3	0.5076142	118	0.34077454
9795	GO:0016740	transferase activity	0.33	68	11.505922	3764	10.870131
3620	GO:0005057	receptor signaling protein ac	0.33	2	0.33840948	69	0.19926646
21710	GO:0046148	pigment biosynthetic process	0.33	2	0.33840948	69	0.19926646
8943	GO:0015672	monovalent inorganic cation	0.33	8	1.3536379	383	1.1060733
3156	GO:0004497	monooxygenase activity	0.34	4	0.67681897	172	0.49672222
3213	GO:0004568	chitinase activity	0.34	24	0.16920474	24	0.06931008
6248	GO:0008843	endochitinase activity	0.34	1	0.16920474	24	0.06931008
9779	GO:0016717	oxidoreductase activity, actin	0.34	24	0.16920474	24	0.06931008
22440	GO:0046939	nucleotide phosphorylation	0.34	1	0.16920474	24	0.06931008
31407	GO:0080030	methyl indole-3-acetate este	0.34	1	0.16920474	24	0.06931008
2821	GO:0004012(GO:0008557)	phospholipid-translocating A	0.34	1	0.16920474	24	0.06931008
8494	GO:0015075	ion transmembrane transport	0.34	16	2.7072759	827	2.3883097
8675	GO:0015293	symporter activity	0.34	4	0.67681897	173	0.49961013
3723	GO:0005215(GO:0005478)	transporter activity	0.35	34	5.752961	1844	5.325324
9482	GO:0016291(GO:0008778)	acyl-CoA thioesterase activit	0.35	1	0.16920474	25	0.072197996
31493	GO:0080118	brassinosteroid sulfotransfer	0.35	1	0.16920474	25	0.072197996
16603	GO:0034220	ion transmembrane transport	0.35	16	2.7072759	833	2.4056373
9913	GO:0016881	acid-amino acid ligase activit	0.35	8	1.3536379	391	1.1291766
9812	GO:0016758	transferase activity, transfer	0.35	10	1.6920474	501	1.4468478
9703	GO:0016620	oxidoreductase activity, actin	0.35	2	0.33840948	73	0.21081814
18786	GO:0042440	pigment metabolic process	0.35	2	0.33840948	73	0.21081814
11202	GO:0019199	transmembrane receptor prt	0.36	10	1.6920474	504	1.4555116
9194	GO:0015935	small ribosomal subunit	0.36	1	0.16920474	26	0.075085916
9421	GO:0016208	AMP binding	0.36	1	0.16920474	26	0.075085916
9658	GO:0016571	histone methylation	0.36	1	0.16920474	26	0.075085916
126	GO:0000160	two-component signal trans	0.36	1	0.16920474	26	0.075085916
13082	GO:0030599	pectinesterase activity	0.36	4	0.67681897	178	0.5140497
12741	GO:0030170	pyridoxal phosphate binding	0.36	3	0.5076142	126	0.3638779
28643	GO:0070279	vitamin B6 binding	0.36	3	0.5076142	126	0.3638779
8810	GO:0015491	cation:cation antiporter activ	0.37	2	0.33840948	75	0.21659398
4612	GO:0006468	protein phosphorylation	0.37	40	6.7681894	2205	6.367863
3329	GO:0004708	MAP kinase kinase activity	0.37	1	0.16920474	27	0.077973835
3725	GO:0005217	intracellular ligand-gated ion	0.37	1	0.16920474	27	0.077973835
8919	GO:0015645	fatty acid ligase activity	0.37	1	0.16920474	27	0.077973835
9541	GO:0016413	O-acetyltransferase activity	0.37	1	0.16920474	27	0.077973835
12573	GO:0022891	substrate-specific transmem	0.37	23	3.8917089	1241	3.5839086
6563	GO:0009199	ribonucleoside triphosphate	0.37	15	2.5380712	790	2.2814567
3877	GO:0005516	calmodulin binding	0.38	5	0.8460237	236	0.6815491
6529	GO:0009165	nucleotide biosynthetic proce	0.38	2	0.33840948	77	0.22236982
4916	GO:0006818	hydrogen transport	0.38	6	1.0152284	292	0.84327257
9246	GO:0015992	proton transport	0.38	6	1.0152284	292	0.84327257
3284	GO:0004650	polygalacturonase activity	0.38	1	0.16920474	28	0.080861755
4374	GO:0006164	purine nucleotide biosynthe	0.38	1	0.16920474	28	0.080861755
7145	GO:0009893	positive regulation of metabo	0.38	1	0.16920474	28	0.080861755
7819	GO:0010604	positive regulation of macrom	0.38	1	0.16920474	28	0.080861755
9827	GO:0016776	phosphotransferase activity,	0.38	1	0.16920474	28	0.080861755
13634	GO:0031177	phosphopantetheine binding	0.38	1	0.16920474	28	0.080861755
13755	GO:0031325	positive regulation of cellular	0.38	1	0.16920474	28	0.080861755
6506	GO:0009141	nucleoside triphosphate met	0.38	15	2.5380712	796	2.2987843
9909	GO:0016877	ligase activity, forming carbo	0.39	2	0.33840948	78	0.22525774
30865	GO:0072509	divalent inorganic cation tran	0.39	2	0.33840948	78	0.22525774
25998	GO:0051716	cellular response to stimulus	0.39	21	3.5532994	1138	3.2864528
25195	GO:0005096(GO:0051869)	response to stimulus	0.39	34	5.752961	1881	5.432177
20510	GO:0044260(GO:0034960)	cellular macromolecule meta	0.39	98	16.582064	5577	16.105928
4427	GO:0006221	pyrimidine nucleotide biosyn	0.39	1	0.16920474	29	0.083749674
4841	GO:0006721	terpenoid metabolic process	0.39	1	0.16920474	29	0.083749674
11834	GO:0019905	syntaxin binding	0.39	1	0.16920474	29	0.083749674
3955	GO:0005634	nucleus	0.40	26	4.399323	1433	4.138389
18674	GO:0042325	regulation of phosphorylatio	0.40	2	0.33840948	81	0.23392151
5916	GO:0008422(GO:0016983)	beta-glucosidase activity	0.40	1	0.16920474	30	0.086637594
6814	GO:0009526	plastid envelope	0.40	1	0.16920474	30	0.086637594
7188	GO:0009941	chloroplast envelope	0.40	1	0.16920474	30	0.086637594
8683	GO:0015301(GO:0015380)	anion:anion antiporter activit	0.40	1	0.16920474	30	0.086637594
5712	GO:0008168(GO:0004480)	methyltransferase activity	0.40	5	0.8460237	244	0.7046524
3242	GO:0004601(GO:0016685)	peroxidase activity	0.41	3	0.5076142	135	0.38986918
9754	GO:0016684	oxidoreductase activity, actin	0.41	3	0.5076142	135	0.38986918
29202	GO:0070838	divalent metal ion transport	0.41	2	0.33840948	80	0.23680943
4373	GO:0006163	purine nucleotide metabolic	0.41	15	2.5380712	812	2.339215
30884	GO:0072528	pyrimidine-containing compo	0.41	1	0.16920474	31	0.08952551

6622	GO:0092591	GO:009121	ribonucleotide metabolic pro	0.41	15	2.5380712	812	2.344991
3787	GO:005319		lipid transporter activity	0.42	2	0.33840948	83	0.23969735
4912	GO:006813	GO:0015458	potassium ion transport	0.42	2	0.33840948	84	0.24258527
30168	GO:0071804		cellular potassium ion transp	0.42	2	0.33840948	84	0.24258527
30169	GO:0071805		potassium ion transmembran	0.42	2	0.33840948	84	0.24258527
30867	GO:0072511		divalent inorganic cation tran	0.42	2	0.33840948	84	0.24258527
3304	GO:0004672	GO:0050222	protein kinase activity	0.42	24	4.0609136	1333	3.8495972
3265	GO:0004630		phospholipase D activity	0.42	1	0.16920474	32	0.09241343
4614	GO:0006470		protein dephosphorylation	0.42	1	0.16920474	32	0.09241343
6942	GO:0009674		potassium:sodium symporte	0.42	1	0.16920474	32	0.09241343
12522	GO:0022820		potassium ion symporter act	0.42	1	0.16920474	32	0.09241343
23914	GO:0048522	GO:0051242	positive regulation of cellular	0.42	1	0.16920474	32	0.09241343
4942	GO:0006855		drug transmembrane transp	0.42	3	0.5076142	139	0.40142086
8607	GO:0015197	GO:0015637	peptide transporter activity	0.42	3	0.5076142	139	0.40142086
8608	GO:0015198		oligopeptide transporter acti	0.42	3	0.5076142	139	0.40142086
8642	GO:0015238	GO:0015239	drug transmembrane transp	0.42	3	0.5076142	139	0.40142086
9154	GO:0015893		drug transport	0.42	3	0.5076142	139	0.40142086
18832	GO:0042493	GO:0017035	response to drug	0.42	3	0.5076142	139	0.40142086
11222	GO:0019220		regulation of phosphate met	0.43	2	0.33840948	85	0.24547319
25471	GO:0051174		regulation of phosphorus me	0.43	2	0.33840948	85	0.24547319
25626	GO:0051336		regulation of hydrolase activ	0.43	4	0.67681897	196	0.5660323
19684	GO:0043412		macromolecule modification	0.43	51	8.629441	2900	8.374968
5768	GO:0008238		exopeptidase activity	0.43	2	0.33840948	86	0.24836111
4944	GO:0006857		oligopeptide transport	0.43	3	0.5076142	141	0.4071967
8676	GO:0015234		solute:cation symporter acti	0.43	3	0.5076142	141	0.4071967
9099	GO:0015833		peptide transport	0.43	3	0.5076142	141	0.4071967
4493	GO:0006298	GO:0006300	mismatch repair	0.43	1	0.16920474	33	0.09530135
30878	GO:0072522		purine-containing compound	0.43	1	0.16920474	33	0.09530135
18953	GO:0042623		ATPase activity, coupled	0.43	10	1.6920474	537	1.550813
30877	GO:0072521		purine-containing compound	0.44	15	2.5380712	827	2.3883097
8557	GO:0015144		carbohydrate transmembran	0.44	3	0.5076142	143	0.41297254
16602	GO:0034219		carbohydrate transmembran	0.44	3	0.5076142	143	0.41297254
3749	GO:0005249		voltage-gated potassium cha	0.44	1	0.16920474	34	0.09818927
5270	GO:0007264		small GTPase mediated sig	0.44	1	0.16920474	34	0.09818927
6486	GO:0009119		ribonucleoside metabolic pro	0.44	1	0.16920474	34	0.09818927
11208	GO:0019205		nucleobase, nucleoside, nuc	0.44	1	0.16920474	34	0.09818927
11831	GO:0019902		phosphatase binding	0.44	1	0.16920474	34	0.09818927
11832	GO:0019903		protein phosphatase binding	0.44	1	0.16920474	34	0.09818927
12574	GO:0022892		substrate-specific transporte	0.44	26	4.399323	1463	4.2250266
26932	GO:0055086		nucleobase, nucleoside and	0.45	17	2.8764806	944	2.7261963
4405	GO:0006195		purine nucleotide catabolic p	0.45	14	2.3688664	773	2.232362
6508	GO:0009143		nucleoside triphosphate cata	0.45	14	2.3688664	773	2.232362
6509	GO:0009144		purine nucleoside triphospha	0.45	14	2.3688664	773	2.232362
6511	GO:0009146		purine nucleoside triphospha	0.45	14	2.3688664	773	2.232362
6519	GO:0009154		purine ribonucleotide catabo	0.45	14	2.3688664	773	2.232362
6530	GO:0009166		nucleotide catabolic process	0.45	14	2.3688664	773	2.232362
6567	GO:0009203		ribonucleoside triphosphate	0.45	14	2.3688664	773	2.232362
6569	GO:0009205		purine ribonucleoside triphos	0.45	14	2.3688664	773	2.232362
6571	GO:0009207		purine ribonucleoside triphos	0.45	14	2.3688664	773	2.232362
6624	GO:0009261		ribonucleotide catabolic proc	0.45	14	2.3688664	773	2.232362
17034	GO:0034655		nucleobase, nucleoside, nuc	0.45	14	2.3688664	773	2.232362
17035	GO:0034656		nucleobase, nucleoside and	0.45	14	2.3688664	773	2.232362
22209	GO:0046700		heterocycle catabolic proces	0.45	14	2.3688664	773	2.232362
30879	GO:0072523		purine-containing compound	0.45	14	2.3688664	773	2.232362
14380	GO:0031967		organelle envelope	0.45	4	0.67681897	201	0.5804719
4426	GO:0006220		pyrimidine nucleotide metab	0.45	1	0.16920474	35	0.10107719
9480	GO:0016289		CoA hydrolase activity	0.45	1	0.16920474	35	0.10107719
12806	GO:0030247		polysaccharide binding	0.45	1	0.16920474	35	0.10107719
1169	GO:0001871		pattern binding	0.45	1	0.16920474	35	0.10107719
28365	GO:0065008		regulation of biological quali	0.45	6	1.0152284	316	0.9125827
20520	GO:0044270		cellular nitrogen compound c	0.46	14	2.3688664	777	2.2439137
6071	GO:0008643	GO:0006861	carbohydrate transport	0.46	3	0.5076142	147	0.42452422
9796	GO:0016741		transferase activity, transferr	0.46	5	0.8460237	261	0.7537471
6794	GO:0009505		plant-type cell wall	0.46	1	0.16920474	36	0.10396511
12626	GO:0030029		actin filament-based process	0.46	1	0.16920474	36	0.10396511
12633	GO:0030036		actin cytoskeleton organizati	0.46	1	0.16920474	36	0.10396511
20649	GO:0044455		mitochondrial membrane pa	0.46	1	0.16920474	36	0.10396511
9579	GO:0016462		pyrophosphatase activity	0.46	17	2.8764806	954	2.7550755
14387	GO:0031975		envelope	0.46	4	0.67681897	205	0.59202355
9859	GO:0016818		hydrolase activity, acting on	0.47	17	2.8764806	956	2.7608514
16785	GO:0034404		nucleobase, nucleoside and	0.47	2	0.33840948	92	0.26568863
17033	GO:0034654		nucleobase, nucleoside, nuc	0.47	2	0.33840948	92	0.26568863
11426	GO:0019438		aromatic compound biosynt	0.47	3	0.5076142	149	0.43030006
3758	GO:0005267		potassium channel activ	0.47	1	0.16920474	37	0.10685303
8934	GO:0015662		ATPase activity, coupled to	0.47	1	0.16920474	37	0.10685303
8980	GO:0015711		organic anion transport	0.47	1	0.16920474	37	0.10685303
9858	GO:0016817		hydrolase activity, acting on	0.47	17	2.8764806	959	2.769515
5018	GO:0006950		response to stress	0.47	11	1.8612521	611	1.764519
9811	GO:0016757	GO:0016932	transferase activity, transferr	0.48	13	2.1996615	729	2.1052935
4029	GO:0005740		mitochondrial envelope	0.48	3	0.5076142	151	0.4360759
5066	GO:0007010		cytoskeleton organization	0.48	1	0.16920474	38	0.10974095
6749	GO:0009414		response to water deprivatio	0.48	1	0.16920474	38	0.10974095
8501	GO:0015085		calcium ion transmembrane	0.48	1	0.16920474	38	0.10974095
8588	GO:0015175		neutral amino acid transmem	0.48	1	0.16920474	38	0.10974095
9073	GO:0015804		neutral amino acid transport	0.48	1	0.16920474	38	0.10974095
12538	GO:0022843		voltage-gated cation channe	0.48	1	0.16920474	38	0.10974095
117	GO:0000149		SNARE binding	0.48	1	0.16920474	38	0.10974095
6515	GO:0009150		purine ribonucleotide metab	0.48	14	2.3688664	791	2.2843447
6623	GO:0009260		ribonucleotide biosynthetic p	0.49	1	0.16920474	39	0.11262887
30883	GO:0072527		pyrimidine-containing compo	0.49	1	0.16920474	39	0.11262887
6424	GO:0009055	GO:0009053	electron carrier activity	0.49	3	0.5076142	154	0.44473964
8517	GO:0015103		inorganic anion transmembran	0.49	3	0.5076142	154	0.44473964
4867	GO:0006753		nucleoside phosphate metal	0.49	16	2.7072759	914	2.6395588
6484	GO:0009117		nucleotide metabolic proces	0.49	16	2.7072759	914	2.6395588
8495	GO:0015077		monovalent inorganic cation	0.50	4	0.67681897	214	0.6180149
23910	GO:0048518	GO:0043119	positive regulation of biologic	0.50	1	0.16920474	40	0.1155168
12572	GO:0022890	GO:0015082	inorganic cation transmembr	0.50	6	1.0152284	332	0.9587894
22007	GO:0046483		heterocycle metabolic proces	0.50	19	3.21489	1094	3.1593843
20627	GO:0044433		cytoplasmic vesicle part	0.51	1	0.16920474	41	0.118404716
3716	GO:0005198		structural molecule activity	0.51	7	1.1844332	393	1.1349525
17020	GO:0034641		cellular nitrogen compound r	0.51	63	10.659899	3678	10.621769
3490	GO:0004888	GO:0004926	transmembrane receptor ac	0.51	10	1.6920474	571	1.6490022
4874	GO:0006767		water-soluble vitamin metab	0.51	1	0.16920474	42	0.121292636
8461	GO:0015020	GO:0003981	glucuronosyltransferase acti	0.51	1	0.16920474	42	0.121292636
12659	GO:0030076		light-harvesting complex	0.51	1	0.16920474	42	0.121292636
13884	GO:0031461		cullin-RING ubiquitin ligase c	0.51	1	0.16920474	42	0.121292636
18713	GO:0042364		water-soluble vitamin biosyn	0.51	1	0.16920474	42	0.121292636
8496	GO:0015078		hydrogen ion transmembran	0.52	3	0.5076142	160	0.4620672
9911	GO:0016879		ligase activity, forming carbo	0.52	8	1.3536379	456	1.3168914
9870	GO:0016830		carbon-carbon lyase activity	0.52	3	0.5076142	161	0.4649551
3900	GO:0005548	GO:0008497	phospholipid transporter acti	0.52	1	0.16920474	43	0.124180555
8589	GO:0015179		L-amino acid transmembran	0.52	1	0.16920474	43	0.124180555
9076	GO:0015807		L-amino acid transport	0.52	1	0.16920474	43	0.124180555
9174	GO:0015914		phospholipid transport	0.52	1	0.16920474	43	0.124180555
13833	GO:0031410		cytoplasmic vesicle	0.52	1	0.16920474	43	0.124180555
14393	GO:0031982		vesicle	0.52	1	0.16920474	43	0.124180555
4873	GO:0006766		vitamin metabolic process	0.53	1	0.16920474	44	0.12706847
4914	GO:0006816		calcium ion transport	0.53	1	0.16920474	44	0.12706847
5797	GO:0008276		protein methyltransferase ac	0.53	1	0.16920474	44	0.12706847
6477	GO:0009110		vitamin biosynthetic process	0.53	1	0.16920474	44	0.12706847
9186	GO:0015926		glucosidase activity	0.53	1	0.16920474	44	0.12706847
9753	GO:0016682		oxidoreductase activity, actin	0.53	1	0.16920474	44	0.12706847

20522	GO:0044272	sulfur compound biosynthetic process	0.53	1	0.16920474	44	0.12706847
28952	GO:0070588	calcium ion transmembrane transport	0.53	1	0.16920474	44	0.12706847
9709	GO:0016627	oxidoreductase activity, acting on NADPH	0.53	2	0.33840948	104	0.30034366
5055	GO:0006996	organelle organization	0.53	3	0.5076142	164	0.47361887
20623	GO:0044429	mitochondrial part	0.54	3	0.5076142	165	0.47650677
14667	GO:0032259	methylation	0.54	5	0.8460237	285	0.82305672
5692	GO:0008134	transcription factor binding	0.54	1	0.16920474	45	0.1299564
8787	GO:0015450	P-P-bond-hydrolysis-driven transport	0.54	1	0.16920474	45	0.1299564
11780	GO:0019829	cation-transporting ATPase activity	0.54	1	0.16920474	45	0.1299564
4476	GO:0006278	RNA-dependent DNA replication	0.54	3	0.5076142	166	0.4793947
3942	GO:0005618	cell wall	0.55	2	0.33840948	107	0.30900744
4906	GO:0006807	nitrogen compound metabolic process	0.55	63	10.659899	3725	10.757502
8497	GO:0015079 GO:0022817	potassium ion transmembrane transport	0.55	1	0.16920474	47	0.13573223
4188	GO:0005938	cell cortex	0.56	1	0.16920474	48	0.13862015
14591	GO:0032183	SUMO binding	0.56	1	0.16920474	48	0.13862015
20642	GO:0044448	cell cortex part	0.56	1	0.16920474	48	0.13862015
113	GO:0000145	exocyst	0.56	1	0.16920474	48	0.13862015
20498	GO:0044248	cellular catabolic process	0.56	15	2.5380712	894	2.5818002
12868	GO:0030312	external encapsulating structure	0.57	2	0.33840948	111	0.3205591
9906	GO:0016874	ligase activity	0.57	10	1.6920474	597	1.7240882
3756	GO:0005261 GO:0015281 GO:0005261	cation channel activity	0.57	1	0.16920474	49	0.14150807
6750	GO:0009415	response to water	0.57	1	0.16920474	49	0.14150807
8909	GO:0015630	microtubule cytoskeleton	0.57	1	0.16920474	49	0.14150807
9493	GO:0016310	phosphorylation	0.57	42	7.106599	2504	7.2313514
4622	GO:0006479	protein methylation	0.58	1	0.16920474	50	0.14439599
5750	GO:0008213	protein alkylation	0.58	1	0.16920474	50	0.14439599
20517	GO:0044267	cellular protein metabolic process	0.58	54	9.137055	3225	9.313541
8967	GO:0015698	inorganic anion transport	0.58	3	0.5076142	176	0.5082739
9871	GO:0016831	carboxyl-lyase activity	0.59	2	0.33840948	115	0.3321108
6166	GO:0008757	S-adenosylmethionine-dependent methyltransferase activity	0.60	3	0.5076142	180	0.5198256
20532	GO:0044282	small molecule catabolic process	0.60	14	2.3688664	854	2.4662836
9750	GO:0016679	oxidoreductase activity, acting on NADPH	0.60	1	0.16920474	53	0.15305975
9836	GO:0016787	hydrolase activity, acting on NADPH	0.60	62	10.490694	3723	10.751725
5981	GO:0008509	anion transmembrane transport	0.60	4	0.67681897	245	0.70754033
17918	GO:0035556 GO:0007242 GO:0007242	intracellular signal transduction	0.61	1	0.16920474	54	0.15594767
4917	GO:0006820 GO:0006822	anion transport	0.61	4	0.67681897	247	0.7133162
20505	GO:0044255	cellular lipid metabolic process	0.61	3	0.5076142	184	0.53137726
4894	GO:0006790	sulfur compound metabolic process	0.61	1	0.16920474	55	0.15883559
4844	GO:0006725	cellular aromatic compound metabolic process	0.61	3	0.5076142	185	0.53426516
3200	GO:0004553 GO:0016800	hydrolase activity, hydrolyzing NADPH	0.62	5	0.8460237	312	0.90103096
12532	GO:0022836	gated channel activity	0.62	2	0.33840948	122	0.3523262
4224	GO:0005984	disaccharide metabolic process	0.62	1	0.16920474	56	0.16172351
9369	GO:0016137	glycoside metabolic process	0.62	1	0.16920474	56	0.16172351
7229	GO:0009987 GO:0008151 GO:0008151	cellular process	0.62	178	30.118443	10601	30.614838
5964	GO:0008483	transaminase activity	0.63	1	0.16920474	57	0.16461143
9813	GO:0016759	cellulose synthase activity	0.63	1	0.16920474	57	0.16461143
9821	GO:0016769	transferase activity, transferring NADPH	0.63	1	0.16920474	57	0.16461143
3323	GO:0004702	receptor signaling protein serine/threonine kinase activity	0.63	1	0.16920474	58	0.16749935
5819	GO:0008299 GO:0009241	isoprenoid biosynthetic process	0.63	1	0.16920474	58	0.16749935
6665	GO:0009311	oligosaccharide metabolic process	0.63	1	0.16920474	58	0.16749935
2831	GO:0004022	alcohol dehydrogenase (NAD-dependent) activity	0.64	1	0.16920474	59	0.17038727
2626	GO:0003674 GO:0005554	molecular function	0.64	413	69.88155	24394	70.447914
10058	GO:0017111	nucleoside-triphosphatase activity	0.64	14	2.3688664	839	2.5355935
3306	GO:0004674 GO:0004692 GO:0004692	protein serine/threonine kinase activity	0.64	17	2.8764806	1062	3.0669708
30206	GO:0071842	cellular component organization	0.64	3	0.5076142	193	0.5573685
5652	GO:0008081 GO:0004434 GO:0004434	phosphoric diester hydrolase activity	0.64	1	0.16920474	60	0.17327519
9824	GO:0016773	phosphotransferase activity, acting on NADPH	0.65	24	4.0609136	1493	4.311664
2818	GO:0004003	ATP-dependent DNA helicase activity	0.65	1	0.16920474	61	0.1761631
4849	GO:0006730 GO:0019753 GO:0019753	one-carbon metabolic process	0.65	5	0.8460237	325	0.93857396
9488	GO:0016301	kinase activity	0.65	28	4.737733	1740	5.0249805
22479	GO:0046983	protein dimerization activity	0.66	8	1.3536379	517	1.4930545
3340	GO:0004721	phosphoprotein phosphatase activity	0.66	3	0.5076142	199	0.57469606
10244	GO:0018130	heterocycle biosynthetic process	0.66	3	0.5076142	199	0.57469606
19126	GO:0042803	protein homodimerization activity	0.66	4	0.67681897	265	0.7652988
22416	GO:0046915	transition metal ion transporter activity	0.67	1	0.16920474	64	0.18482687
15436	GO:0033036	macromolecule localization	0.67	6	1.0152284	397	1.1465042
9838	GO:0016790	thiolester hydrolase activity	0.67	1	0.16920474	65	0.18771479
5791	GO:0008270	zinc ion binding	0.67	30	5.0761423	1880	5.4292893
9765	GO:0016702	oxidoreductase activity, acting on NADPH	0.68	1	0.16920474	66	0.1906027
2629	GO:0003678 GO:0003679	DNA helicase activity	0.68	1	0.16920474	67	0.19349062
4897	GO:0006793	phosphorus metabolic process	0.69	47	7.952623	2925	8.4471655
4900	GO:0006796	phosphate metabolic process	0.69	47	7.952623	2925	8.4471655
18955	GO:0042625	ATPase activity, coupled to transport	0.69	1	0.16920474	68	0.19637854
32	GO:0000041	transition metal ion transport	0.69	1	0.16920474	68	0.19637854
3724	GO:0005216	ion channel activity	0.69	2	0.33840948	140	0.40430877
6046	GO:0008610	lipid biosynthetic process	0.70	2	0.33840948	141	0.4071967
5726	GO:0008187	poly-pyrimidine tract binding	0.70	1	0.16920474	70	0.20215438
5788	GO:0008266	poly(U) RNA binding	0.70	1	0.16920474	70	0.20215438
5838	GO:0008320	protein transmembrane transport	0.70	1	0.16920474	70	0.20215438
12568	GO:0022884	macromolecule transmembrane transport	0.70	1	0.16920474	70	0.20215438
9771	GO:0016709	oxidoreductase activity, acting on NADPH	0.71	1	0.16920474	71	0.2050423
3744	GO:0005244	voltage-gated ion channel activity	0.71	1	0.16920474	72	0.20793022
9764	GO:0016701	oxidoreductase activity, acting on NADPH	0.71	1	0.16920474	72	0.20793022
12528	GO:0022832	voltage-gated channel activity	0.71	1	0.16920474	72	0.20793022
15280	GO:0032879	regulation of localization	0.71	1	0.16920474	72	0.20793022
17141	GO:0034762	regulation of transmembrane transport	0.71	1	0.16920474	72	0.20793022
17144	GO:0034765	regulation of ion transmembrane transport	0.71	1	0.16920474	72	0.20793022
19568	GO:0043269	regulation of ion transport	0.71	1	0.16920474	72	0.20793022
25348	GO:0051049	regulation of transport	0.71	1	0.16920474	72	0.20793022
3311	GO:0004683 GO:0004684 GO:0004684	calmodulin-dependent protein kinase activity	0.72	1	0.16920474	74	0.21370606
20628	GO:0044434	chloroplast part	0.72	1	0.16920474	74	0.21370606
20629	GO:0044435	plastid part	0.72	1	0.16920474	74	0.21370606
4028	GO:0005739	mitochondrion	0.72	3	0.5076142	219	0.63245445
25510	GO:0051213	dioxygenase activity	0.73	1	0.16920474	75	0.21659398
5019	GO:0006952 GO:0022171 GO:0022171	defense response	0.73	3	0.5076142	221	0.63823026
5663	GO:0008094 GO:0004011	DNA-dependent ATPase activity	0.73	1	0.16920474	76	0.2194819
5604	GO:0008017	microtubule binding	0.73	1	0.16920474	77	0.22236982
13656	GO:0031224	intrinsic to membrane	0.74	18	3.0456853	1193	3.4452884
4460	GO:0006260 GO:0055133	DNA replication	0.74	3	0.5076142	224	0.64689404
13547	GO:0031090	organelle membrane	0.74	3	0.5076142	224	0.64689404
9697	GO:0016614	oxidoreductase activity, acting on NADPH	0.74	4	0.67681897	293	0.84616053
5681	GO:0008116	prostaglandin-H synthase activity	0.74	1	0.16920474	78	0.22525774
9800	GO:0016746	transferase activity, transferring NADPH	0.75	7	1.1844332	498	1.438184
9655	GO:0016568	chromatin modification	0.75	1	0.16920474	80	0.2310336
9656	GO:0016569	covalent chromatin modification	0.75	1	0.16920474	80	0.2310336
9657	GO:0016570	histone modification	0.75	1	0.16920474	80	0.2310336
9875	GO:0016836	hydro-lyase activity	0.75	1	0.16920474	80	0.2310336
3307	GO:0004675	transmembrane receptor protein tyrosine kinase activity	0.75	5	0.8460237	367	1.0598665
19526	GO:0043227	membrane-bounded organelle	0.75	33	5.5837564	2142	6.185924
19530	GO:0043231	intracellular membrane-bounded organelle	0.75	33	5.5837564	2142	6.185924
6991	GO:0009725	response to hormone stimulus	0.76	1	0.16920474	82	0.23680943
20487	GO:0044237	cellular metabolic process	0.76	133	22.50423	8185	23.637625
4643	GO:0006511	ubiquitin-dependent protein catabolic process	0.76	1	0.16920474	84	0.24258527
11864	GO:0019941	modification-dependent protein catabolic process	0.76	1	0.16920474	84	0.24258527
19898	GO:0043632	modification-dependent macromolecule catabolic process	0.76	1	0.16920474	84	0.24258527
20507	GO:0044257	cellular protein catabolic process	0.76	1	0.16920474	84	0.24258527
25887	GO:0051603	proteolysis involved in cellular catabolic process	0.76	1	0.16920474	84	0.24258527
9837	GO:0016788	hydrolase activity, acting on NADPH	0.77	23	3.8917089	1534	4.430069
2628	GO:0003677	DNA binding	0.77	18	3.0456853	1224	3.534814
6985	GO:0009719	response to endogenous stimulus	0.77	1	0.16920474	86	0.24836111
12734	GO:0030163	protein catabolic process	0.77	1	0.16920474	86	0.24836111
19952	GO:0043687	post-translational protein modification	0.77	1	0.16920474	86	0.24836111

20515	GO:0044265 GO:0034962	cellular macromolecule cata	0.77	1	0.16920474	86	0.24836111
9267	GO:0016021	integral to membrane	0.78	16	2.7072759	1103	3.1853757
20624	GO:0044430	cytoskeletal part	0.78	1	0.16920474	88	0.25413695
119	GO:0000151	ubiquitin ligase complex	0.78	1	0.16920474	88	0.25413695
14590	GO:0032182	small conjugating protein bin	0.79	1	0.16920474	90	0.2599128
2982	GO:0004197	cysteine-type endopeptidase	0.79	1	0.16920474	90	0.2599128
3644	GO:0005102	receptor binding	0.79	1	0.16920474	91	0.2628007
3341	GO:0004722 GO:0001581	protein serine/threonine phos	0.79	2	0.33840948	171	0.4938343
9801	GO:0016747	transferase activity, transfer	0.79	6	1.0152284	456	1.3168914
2660	GO:0003735 GO:0003736	structural constituent of ribos	0.79	3	0.5076142	246	0.7104283
6425	GO:0009056	catabolic process	0.79	15	2.5380712	1051	3.0352037
4067	GO:0005783	endoplasmic reticulum	0.80	2	0.33840948	174	0.50249803
18582	GO:0042221	response to chemical stimul	0.81	4	0.67681897	328	0.94723773
9845	GO:0016798	hydrolase activity, acting on	0.82	5	0.8460237	401	1.1580559
5809	GO:0008289	lipid binding	0.82	3	0.5076142	258	0.74508333
30306	GO:0071944	cell periphery	0.82	3	0.5076142	259	0.74797124
7271	GO:0010033	response to organic substan	0.82	1	0.16920474	100	0.28879198
5280	GO:0007275	multicellular organismal deve	0.82	1	0.16920474	101	0.2916799
9285	GO:0016043	cellular component organiza	0.82	3	0.5076142	261	0.7537471
9486	GO:0016298	lipase activity	0.83	2	0.33840948	185	0.53426516
9699	GO:0016616	oxidoreductase activity, acti	0.83	3	0.5076142	266	0.7681867
14909	GO:0032501 GO:0050874	multicellular organismal proc	0.84	1	0.16920474	105	0.3032316
9823	GO:0016772	transferase activity, transfer	0.84	28	4.737733	1932	5.579461
6426	GO:0009057 GO:0043285	macromolecule catabolic pr	0.84	1	0.16920474	106	0.3061195
9869	GO:0016829	lyase activity	0.84	6	1.0152284	488	1.4093049
8910	GO:0015631	tubulin binding	0.84	1	0.16920474	107	0.30900744
9494	GO:0016311	dephosphorylation	0.85	5	0.8460237	425	1.227366
4512	GO:0006325	chromatin organization	0.86	1	0.16920474	112	0.32344702
5070	GO:0007017	microtubule-based process	0.86	1	0.16920474	112	0.32344702
5071	GO:0007018	microtubule-based moveme	0.86	1	0.16920474	112	0.32344702
25568	GO:0051276 GO:0007001	chromosome organization	0.86	1	0.16920474	112	0.32344702
19686	GO:0043414	macromolecule methylation	0.86	1	0.16920474	113	0.32633495
22478	GO:0046982	protein heterodimerization a	0.86	1	0.16920474	114	0.32922286
6020	GO:0008565 GO:0015463	protein transporter activity	0.86	1	0.16920474	115	0.3321108
9535	GO:0016407	acetyltransferase activity	0.86	1	0.16920474	115	0.3321108
30205	GO:0071841	cellular component organiza	0.87	3	0.5076142	285	0.8230572
14910	GO:0032502	developmental process	0.88	1	0.16920474	121	0.3494383
18912	GO:0042578	phosphoric ester hydrolase a	0.88	5	0.8460237	444	1.2822365
4755	GO:0006629	lipid metabolic process	0.88	7	1.1844332	590	1.7038727
3260	GO:0004620	phospholipase activity	0.88	1	0.16920474	123	0.35521415
4121	GO:0005856	cytoskeleton	0.89	1	0.16920474	126	0.3638779
13018	GO:0030529	ribonucleoprotein complex	0.89	9	1.5228426	741	2.1399486
12533	GO:0022838	substrate-specific channel ac	0.89	2	0.33840948	221	0.63823026
9839	GO:0016791 GO:0016302	phosphatase activity	0.89	4	0.67681897	383	1.1060733
4109	GO:0005840 GO:0032729	ribosome	0.90	8	1.3536379	682	1.9695613
8660	GO:0015267 GO:0015249	channel activity	0.90	2	0.33840948	226	0.6526699
12515	GO:0022803	passive transmembrane tran	0.90	2	0.33840948	226	0.6526699
6796	GO:0009507	chloroplast	0.90	2	0.33840948	229	0.6613336
20531	GO:0044281	small molecule metabolic pr	0.91	24	4.0609136	1788	5.1636004
19125	GO:0042802	identical protein binding	0.91	8	1.3536379	697	2.01288
3873	GO:0005507	copper ion binding	0.92	1	0.16920474	146	0.42163628
9895	GO:0016860	intramolecular oxidoreductas	0.92	1	0.16920474	146	0.42163628
5909	GO:0008415	acyltransferase activity	0.92	3	0.5076142	330	0.95301354
4478	GO:0006281	DNA repair	0.92	1	0.16920474	149	0.43030006
5037	GO:0006974 GO:0034984	response to DNA damage s	0.92	1	0.16920474	149	0.43030006
6824	GO:0009536	plastid	0.93	2	0.33840948	247	0.7133162
19525	GO:0043226	organelle	0.93	42	7.106599	3013	8.701303
19528	GO:0043229	intracellular organelle	0.93	42	7.106599	3013	8.701303
19831	GO:0043565	sequence-specific DNA bind	0.94	1	0.16920474	159	0.45917925
20533	GO:0044283	small molecule biosynthetic	0.94	3	0.5076142	347	1.0021082
5764	GO:0008234 GO:0004220	cysteine-type peptidase acti	0.94	1	0.16920474	163	0.47073093
20619	GO:0044425	membrane part	0.94	19	3.21489	1523	4.398302
3178	GO:0004519	endonuclease activity	0.94	3	0.5076142	356	1.0280994
6899	GO:0009628	response to abiotic stimulus	0.95	1	0.16920474	170	0.49094638
30204	GO:0071840	cellular component organiza	0.95	3	0.5076142	362	1.045427
4605	GO:0006457 GO:0007022	protein folding	0.95	1	0.16920474	173	0.49961013
15949	GO:0033554	cellular response to stress	0.95	1	0.16920474	173	0.49961013
20521	GO:0044271	cellular nitrogen compound t	0.95	3	0.5076142	367	1.0598665
4215	GO:0005975	carbohydrate metabolic proc	0.95	11	1.8612521	990	2.8590407
3904	GO:0005576	extracellular region	0.95	1	0.16920474	178	0.5140497
20622	GO:0044428	nuclear part	0.95	1	0.16920474	178	0.5140497
4572	GO:0006412 GO:0006416	translation	0.96	1	0.16920474	180	0.5198256
5610	GO:0008026	ATP-dependent helicase act	0.96	1	0.16920474	183	0.52848935
28401	GO:0070035	purine NTP-dependent helic	0.96	1	0.16920474	183	0.52848935
8466	GO:0015031 GO:0015831	protein transport	0.96	1	0.16920474	185	0.53426516
20820	GO:0045184	establishment of protein loca	0.96	1	0.16920474	185	0.53426516
20640	GO:0044446	intracellular organelle part	0.96	7	1.1844332	710	2.0504231
20616	GO:0044422	organelle part	0.96	7	1.1844332	712	2.0561988
5669	GO:0008104	protein localization	0.96	1	0.16920474	189	0.54581684
3068	GO:0004386	helicase activity	0.96	1	0.16920474	189	0.54581684
9874	GO:0016835	carbon-oxygen lyase activity	0.97	1	0.16920474	202	0.5833598
4459	GO:0006259 GO:0055132	DNA metabolic process	0.97	4	0.67681897	493	1.4237444
3863	GO:0005488	binding	0.97	215	36.379017	13903	40.15075
9266	GO:0016020	membrane	0.98	50	8.460237	3741	10.803708
19527	GO:0043228	non-membrane-bounded org	0.98	9	1.5228426	923	2.66555
19531	GO:0043232	intracellular non-membrane-	0.98	9	1.5228426	923	2.66555
4558	GO:0006396 GO:0006394	RNA processing	0.98	1	0.16920474	219	0.63245445
3177	GO:0004518	nuclease activity	0.98	3	0.5076142	427	1.2331418
13531	GO:0031072	heat shock protein binding	0.98	1	0.16920474	230	0.6642216
2627	GO:0003676	nucleic acid binding	0.98	30	5.0761423	2453	7.0840673
11828	GO:0019899	enzyme binding	0.98	1	0.16920474	237	0.684437
2653	GO:0003723	RNA binding	0.98	7	1.1844332	797	2.3016722
13041	GO:0030554	adenyl nucleotide binding	0.99	4	0.67681897	550	1.5883559
14965	GO:0032559	adenyl ribonucleotide binding	0.99	4	0.67681897	550	1.5883559
20512	GO:0044262 GO:0006092	cellular carbohydrate metab	0.99	1	0.16920474	248	0.7162041
5661	GO:0008092	cytoskeletal protein binding	0.99	1	0.16920474	249	0.719092
4649	GO:0006520 GO:0006519	cellular amino acid metaboli	0.99	1	0.16920474	277	0.7999538
3884	GO:0005524	ATP binding	0.99	3	0.5076142	524	1.51327
20356	GO:0044106	cellular amine metabolic pro	0.99	1	0.16920474	303	0.8750397
9889	GO:0016853	isomerase activity	0.99	1	0.16920474	306	0.8837035
6662	GO:0009308	amine metabolic process	1.00	1	0.16920474	314	0.9068068
20638	GO:0044444	cytoplasmic part	1.00	16	2.7072759	1644	4.7477403
19533	GO:0043234	protein complex	1.00	6	1.0152284	848	2.448956
15392	GO:0032991	macromolecular complex	1.00	15	2.5380712	1616	4.666878
4320	GO:0006082	organic acid metabolic proc	1.00	1	0.16920474	369	1.0656425
11716	GO:0019752	carboxylic acid metabolic pro	1.00	1	0.16920474	369	1.0656425
19707	GO:0043436	oxoacid metabolic process	1.00	1	0.16920474	369	1.0656425
20618	GO:0044424	intracellular part	1.00	45	7.614213	3853	11.127155
18541	GO:0042180	cellular ketone metabolic pro	1.00	1	0.16920474	375	1.0829699
3945	GO:0005622	intracellular	1.00	56	9.475466	4751	13.720507
14959	GO:0032553	ribonucleotide binding	1.00	4	0.67681897	795	2.2958963
14961	GO:0032555	purine ribonucleotide binding	1.00	4	0.67681897	795	2.2958963
10033	GO:0017076	purine nucleotide binding	1.00	4	0.67681897	797	2.3016722
3876	GO:0005515 GO:0045308	protein binding	1.00	88	14.890017	6933	20.021948
4027	GO:0005737	cytoplasm	1.00	17	2.8764806	2001	5.7787275
18000	GO:0035639	purine ribonucleoside triphos	1.00	3	0.5076142	769	2.2208104
3946	GO:0005623	cell	1.00	105	17.766497	8227	23.758917
20657	GO:0044464	cell part	1.00	105	17.766497	8227	23.758917
3903	GO:0005575 GO:0008372	cellular component	1.00	108	18.27411	8515	24.590637
131	GO:0000166	nucleotide binding	1.00	6	1.0152284	1213	3.5030468

GO ID	GO ACCESSION	GO Term	p-value	Count in Selection	% Count in Selection	Count in Total	% Count in Total
6427	GO:0009058	biosynthetic process	0.00	42	15.730337	2796	8.074624
17024	GO:0034645 GO:003496	cellular macromolecule bi	0.00	31	11.610487	1999	5.7729516
6428	GO:0009059 GO:004328	macromolecule biosynthe	0.00	31	11.610487	2003	5.7845035
20499	GO:0044249	cellular biosynthetic proce	0.00	37	13.857677	2635	7.6096687
4476	GO:0006278	RNA-dependent DNA rep	0.00	7	2.621723	166	0.4793947
4109	GO:0005840 GO:003327	ribosome	0.00	14	5.243446	682	1.9695613
6613	GO:0009250	glucan biosynthetic proce	0.00	2	0.7490637	8	0.023103358
4460	GO:0006260 GO:005513	DNA replication	0.00	7	2.621723	224	0.64689404
13018	GO:0030529	ribonucleoprotein comple	0.00	14	5.243446	741	2.1399486
2837	GO:0004028	3-chloroallyl aldehyde def	0.00	2	0.7490637	9	0.025991278
31895	GO:0090304	nucleic acid metabolic pro	0.00	31	11.610487	2340	6.7577324
6275	GO:0008878	glucose-1-phosphate ade	0.00	2	0.7490637	10	0.0288792
26959	GO:0055114	oxidation-reduction proce	0.00	32	11.985019	2490	7.1909204
5624	GO:0008047	enzyme activator activity	0.00	4	1.4981273	85	0.24547319
4459	GO:0006259 GO:005513	DNA metabolic process	0.01	3	3.7453184	493	1.4237444
19527	GO:0043228	non-membrane-bounded	0.01	10	5.6179776	923	2.66555
19531	GO:0043232	intracellular non-membran	0.01	15	5.6179776	923	2.66555
8493	GO:0015074	DNA integration	0.01	3	1.1235955	47	0.13573223
16081	GO:0033692	cellular polysaccharide bi	0.01	2	0.7490637	15	0.043318797
206	GO:0000271	polysaccharide biosynthe	0.01	2	0.7490637	16	0.046206716
25635	GO:0051345	positive regulation of hydr	0.01	3	1.1235955	53	0.15305975
19392	GO:0043085	positive regulation of cata	0.01	4	1.4981273	104	0.30034366
20343	GO:0044093	positive regulation of mol	0.01	4	1.4981273	104	0.30034366
2662	GO:0003746 GO:000818	translational elongation fact	0.01	2	0.7490637	22	0.06353424
4574	GO:0006414 GO:000644	translational elongation	0.01	2	0.7490637	22	0.06353424
4357	GO:0006139 GO:005513	nucleobase, nucleoside, r	0.01	37	13.857677	3285	9.486816
17016	GO:0034637	cellular carbohydrate bios	0.01	3	1.1235955	63	0.18193895
9293	GO:0016051 GO:000609	carbohydrate biosynthetic	0.01	3	1.1235955	64	0.18482687
9767	GO:0016705	oxidoreductase activity, a	0.01	2	2.621723	329	0.95012563
4311	GO:0006073	cellular glucan metabolic	0.01	7	0.7490637	24	0.06931008
20293	GO:0044042	glucan metabolic process	0.01	2	0.7490637	24	0.06931008
3309	GO:0004677	DNA-dependent protein k	0.02	1	0.37453184	2	0.00577584
4600	GO:0006448	regulation of translational	0.02	1	0.37453184	2	0.00577584
4602	GO:0006450 GO:000029	regulation of translational	0.02	1	0.37453184	2	0.00577584
14849	GO:0032441	phosphoribide a oxygenas	0.02	1	0.37453184	2	0.00577584
24925	GO:0050619	phytochromobilin:ferredox	0.02	1	0.37453184	2	0.00577584
26020	GO:0051738	xanthophyll binding	0.02	1	0.37453184	2	0.00577584
5809	GO:0008289	lipid binding	0.02	6	2.247191	258	0.74508333
17020	GO:0034641	cellular nitrogen compour	0.02	40	14.981274	3678	10.621769
3896	GO:0005544	calcium-dependent phosph	0.02	2	0.7490637	26	0.075085916
9194	GO:0015935	small ribosomal subunit	0.02	2	0.7490637	26	0.075085916
9771	GO:0016709	oxidoreductase activity, a	0.02	3	1.1235955	71	0.2050423
9703	GO:0016620	oxidoreductase activity, a	0.02	3	1.1235955	73	0.21081814
4906	GO:0006807	nitrogen compound metal	0.02	40	14.981274	3725	10.757502
20487	GO:0044237	cellular metabolic process	0.02	78	29.213484	8185	23.637625
4526	GO:0006351 GO:000635	transcription, DNA-depend	0.02	20	7.490637	1575	4.548474
15176	GO:0032774	RNA biosynthetic process	0.02	26	7.490637	1575	4.548474
20510	GO:0044260 GO:003496	cellular macromolecule m	0.02	50	20.973783	5577	16.105928
11827	GO:0019898 GO:003039	extrinsic to membrane	0.02	2	0.7490637	30	0.086637594
3895	GO:0005543	phospholipid binding	0.02	4	1.4981273	140	0.40430877
20514	GO:0044264	cellular polysaccharide m	0.02	2	0.7490637	31	0.08952551
4358	GO:0006140	regulation of nucleotide m	0.02	3	1.1235955	80	0.2310336
7146	GO:0009894	regulation of catabolic pro	0.02	3	1.1235955	80	0.2310336
13278	GO:0030811	regulation of nucleotide c	0.02	3	1.1235955	80	0.2310336
13759	GO:0031329	regulation of cellular catal	0.02	3	1.1235955	80	0.2310336
15521	GO:0033121	regulation of purine nucle	0.02	3	1.1235955	80	0.2310336
2632	GO:0003682	chromatin binding	0.03	2	0.7490637	33	0.09530135
2985	GO:0004222	metalloendopeptidase act	0.03	2	0.7490637	34	0.09818927
2805	GO:0003989	acetyl-CoA carboxylase a	0.03	1	0.37453184	4	0.011551679
3033	GO:0004349	glutamate 5-kinase activit	0.03	1	0.37453184	4	0.011551679
3057	GO:0004373	glycogen (starch) synthas	0.03	1	0.37453184	4	0.011551679
3100	GO:0004430	1-phosphatidylinositol 4-k	0.03	1	0.37453184	4	0.011551679
3466	GO:0004859	phospholipase inhibitor ac	0.03	1	0.37453184	4	0.011551679
3640	GO:0005098	Ran GTPase activator act	0.03	1	0.37453184	4	0.011551679
4218	GO:0005978	glycogen biosynthetic pro	0.03	1	0.37453184	4	0.011551679
4859	GO:0006743	ubiquinone metabolic pro	0.03	1	0.37453184	4	0.011551679
4860	GO:0006744	ubiquinone biosynthetic p	0.03	1	0.37453184	4	0.011551679
5729	GO:0008191	metalloendopeptidase inh	0.03	1	0.37453184	4	0.011551679
7792	GO:0010576	metalloenzyme regulator	0.03	1	0.37453184	4	0.011551679
8911	GO:0015633	zinc transporting ATPase	0.03	1	0.37453184	4	0.011551679
9718	GO:0016636	oxidoreductase activity, a	0.03	1	0.37453184	4	0.011551679
9790	GO:0016730	oxidoreductase activity, a	0.03	1	0.37453184	4	0.011551679
10039	GO:0017084	delta1-pyrroline-5-carboxy	0.03	1	0.37453184	4	0.011551679
11781	GO:0019834	phospholipase A2 inhibit	0.03	1	0.37453184	4	0.011551679
11857	GO:0019932	second-messenger-media	0.03	1	0.37453184	4	0.011551679
14425	GO:0032015	regulation of Ran protein	0.03	1	0.37453184	4	0.011551679
14724	GO:0032316	regulation of Ran GTPase	0.03	1	0.37453184	4	0.011551679
15254	GO:0032853	positive regulation of Ran	0.03	1	0.37453184	4	0.011551679
20918	GO:0045300	acyl-[acyl-carrier-protein]	0.03	1	0.37453184	4	0.011551679
23493	GO:0048015	phosphatidylinositol-medi	0.03	1	0.37453184	4	0.011551679
23495	GO:0048017	inositol lipid-mediated sig	0.03	1	0.37453184	4	0.011551679
23942	GO:0048551	metalloenzyme inhibitor a	0.03	1	0.37453184	4	0.011551679
26947	GO:0055102	lipase inhibitor activity	0.03	1	0.37453184	4	0.011551679
7691	GO:0010467	gene expression	0.03	23	8.614232	1974	5.7007537
13791	GO:0031361	integral to thylakoid mem	0.04	1	0.37453184	5	0.0144396
3638	GO:0005096	GTPase activator activity	0.04	2	0.7490637	41	0.118404716
19813	GO:0043547	positive regulation of GTP	0.04	2	0.7490637	41	0.118404716
5607	GO:0008022	protein C-terminus bindin	0.04	2	0.7490637	42	0.121292636
3029	GO:0004345	glucose-6-phosphate deh	0.05	1	0.37453184	6	0.01732752
3208	GO:0004563	beta-N-acetylhexosaminic	0.05	1	0.37453184	6	0.01732752
3342	GO:0004723 GO:000859	calcium-dependent protei	0.05	1	0.37453184	6	0.01732752
5810	GO:0008290	F-actin capping protein cd	0.05	1	0.37453184	6	0.01732752
7220	GO:0009973	adenylyl-sulfate reductase	0.05	1	0.37453184	6	0.01732752
9248	GO:0015994	chlorophyll metabolic pro	0.05	1	0.37453184	6	0.01732752
9249	GO:0015995	chlorophyll biosynthetic p	0.05	1	0.37453184	6	0.01732752
9435	GO:0016231	beta-N-acetylglucosamin	0.05	1	0.37453184	6	0.01732752
9825	GO:0016774	phosphotransferase activ	0.05	1	0.37453184	6	0.01732752
13832	GO:0031409	pigment binding	0.05	1	0.37453184	6	0.01732752
14264	GO:0031849	olfactory receptor binding	0.05	1	0.37453184	6	0.01732752
18724	GO:0042375	quinone cofactor metabol	0.05	1	0.37453184	6	0.01732752
21036	GO:0045426	quinone cofactor biosynth	0.05	1	0.37453184	6	0.01732752
9600	GO:0016491	oxidoreductase activity	0.05	20	7.490637	1724	4.9787736
14726	GO:0032318	regulation of Ras GTPase	0.05	2	0.7490637	45	0.1299564
22096	GO:0046578	regulation of Ras protein	0.05	2	0.7490637	45	0.1299564
25355	GO:0051056	regulation of small GTPas	0.05	2	0.7490637	45	0.1299564
19253	GO:0042936	dipeptide transporter activ	0.05	3	1.1235955	105	0.3032316
19255	GO:0042938	dipeptide transport	0.05	3	1.1235955	105	0.3032316

3904	GO:0005576	extracellular region	0.05	4	1.4981273	178	0.5140497
9308	GO:0016070	RNA metabolic process	0.05	21	7.8651686	1855	5.3570914
20638	GO:0044444	cytoplasmic part	0.05	19	7.116105	1644	4.7477403
28930	GO:0070566	adenyllyltransferase activi	0.05	2	0.7490637	48	0.13862015
4216	GO:0005976	polysaccharide metabolic	0.06	2	0.7490637	50	0.14439599
5096	GO:0007047	cellular cell wall organizat	0.06	2	0.7490637	50	0.14439599
6932	GO:0009664	plant-type cell wall organi	0.06	2	0.7490637	50	0.14439599
9783	GO:0016722	oxidoreductase activity, o	0.06	2	0.7490637	50	0.14439599
20857	GO:0045229	external encapsulating str	0.06	2	0.7490637	50	0.14439599
30033	GO:0071669	plant-type cell wall organi	0.06	2	0.7490637	50	0.14439599
9933	GO:0016903	oxidoreductase activity, a	0.06	3	1.1235955	113	0.32633495
18912	GO:0042578	phosphoric ester hydrolas	0.06	7	2.621723	444	1.2822365
7213	GO:0009966 GO:0035466	regulation of signal trans	0.06	2	0.7490637	51	0.14728391
12601	GO:0023051	regulation of signaling	0.06	2	0.7490637	51	0.14728391
3051	GO:0004367	glycerol-3-phosphate deh	0.06	1	0.37453184	8	0.023103358
3257	GO:0004617	phosphoglycerate dehydr	0.06	1	0.37453184	8	0.023103358
5635	GO:0008060	ARF GTPase activator ac	0.06	1	0.37453184	8	0.023103358
6684	GO:0009331	glycerol-3-phosphate deh	0.06	1	0.37453184	8	0.023103358
9549	GO:0016421	CoA carboxylase activity	0.06	1	0.37453184	8	0.023103358
9916	GO:0016885	ligase activity, forming ca	0.06	1	0.37453184	8	0.023103358
29246	GO:0070882	cellular cell wall organizat	0.06	2	0.7490637	53	0.15305975
25626	GO:0051336	regulation of hydrolase ac	0.07	4	1.4981273	196	0.5660323
3158	GO:0004499 GO:0047076	flavin-containing monooxy	0.07	1	0.37453184	9	0.025991278
6670	GO:0009317	acetyl-CoA carboxylase c	0.07	1	0.37453184	9	0.025991278
11785	GO:0019840	isoprenoid binding	0.07	1	0.37453184	9	0.025991278
19254	GO:0042937	tripeptide transporter activ	0.07	1	0.37453184	9	0.025991278
3340	GO:0004721	phosphoprotein phosphat	0.07	4	1.4981273	199	0.57469606
5767	GO:0008237	metallopeptidase activity	0.07	2	0.7490637	56	0.16172351
23973	GO:0048583	regulation of response to	0.07	2	0.7490637	57	0.16461143
29919	GO:0071555	cell wall organization	0.07	2	0.7490637	58	0.16749935
11205	GO:0019202	amino acid kinase activity	0.07	1	0.37453184	10	0.0288792
15183	GO:0032781	positive regulation of ATP	0.07	1	0.37453184	10	0.0288792
19728	GO:0043462	regulation of ATPase activi	0.07	1	0.37453184	10	0.0288792
21148	GO:0045547	dehydrodolichyl diphosph	0.07	1	0.37453184	10	0.0288792
27563	GO:0060590	ATPase regulator activity	0.07	1	0.37453184	10	0.0288792
31441	GO:0080065	4-alpha-methyl-delta7-ste	0.07	1	0.37453184	10	0.0288792
196	GO:0000254	C-4 methylsterol oxidase	0.07	1	0.37453184	10	0.0288792
983	GO:0001664	G-protein-coupled recept	0.07	1	0.37453184	10	0.0288792
989	GO:0001671	ATPase activator activity	0.07	1	0.37453184	10	0.0288792
9839	GO:0016791 GO:0016302	phosphatase activity	0.08	6	2.247191	383	1.1060733
25095	GO:0050790	regulation of catalytic acti	0.08	7	2.621723	480	1.3862015
12579	GO:0022900	electron transport chain	0.08	1	0.37453184	11	0.03176712
19256	GO:0042939	tripeptide transport	0.08	1	0.37453184	11	0.03176712
19473	GO:0043170 GO:0043288	macromolecule metabolic	0.08	60	22.47191	6553	18.92454
28366	GO:0065009	regulation of molecular fu	0.08	7	2.621723	484	1.3977532
6018	GO:0008559 GO:0005228	xenobiotic-transporting A	0.08	2	0.7490637	62	0.17905103
19225	GO:0042908	xenobiotic transport	0.08	2	0.7490637	62	0.17905103
19227	GO:0042910	xenobiotic transporter act	0.08	2	0.7490637	62	0.17905103
25820	GO:0051536	iron-sulfur cluster binding	0.09	2	0.7490637	64	0.18482687
25824	GO:0051540	metal cluster binding	0.09	2	0.7490637	64	0.18482687
3386	GO:0004773	sterol-sulfatase activity	0.09	1	0.37453184	12	0.03465504
4217	GO:0005977	glycogen metabolic proces	0.09	1	0.37453184	12	0.03465504
4344	GO:0006112	energy reserve metabolic	0.09	1	0.37453184	12	0.03465504
5965	GO:0008484	sulfuric ester hydrolase at	0.09	1	0.37453184	12	0.03465504
8607	GO:0015197 GO:0015633	peptide transporter activit	0.09	3	1.1235955	139	0.40142086
8608	GO:0015198	oligopeptide transporter a	0.09	3	1.1235955	139	0.40142086
12794	GO:0030234	enzyme regulator activity	0.09	6	2.247191	403	1.1638317
2628	GO:0003677	DNA binding	0.09	14	5.243446	1224	3.534814
7551	GO:0010327	acetyl CoA:(Z)-3-hexen-1-	0.10	1	0.37453184	13	0.037542958
4944	GO:0006857	oligopeptide transport	0.10	3	1.1235955	141	0.4071967
9099	GO:0015833	peptide transport	0.10	3	1.1235955	141	0.4071967
21710	GO:0046148	pigment biosynthetic proc	0.10	2	0.7490637	69	0.19926646
15524	GO:0033124	regulation of GTP catabol	0.10	2	0.7490637	70	0.20215438
19394	GO:0043087	regulation of GTPase acti	0.10	2	0.7490637	70	0.20215438
3641	GO:0005099	Ras GTPase activator act	0.10	1	0.37453184	14	0.040430877
14728	GO:0032320	positive regulation of Ras	0.10	1	0.37453184	14	0.040430877
25040	GO:0050734	hydroxycinnamoyltransfer	0.10	1	0.37453184	14	0.040430877
9740	GO:0016667	oxidoreductase activity, a	0.11	2	0.7490637	72	0.20793022
5705	GO:0008152	metabolic process	0.11	145	54.307117	17432	50.34222
18786	GO:0042440	pigment metabolic proces	0.11	2	0.7490637	73	0.21081814
9494	GO:0016311	dephosphorylation	0.11	6	2.247191	425	1.227366
27562	GO:0060589	nucleoside-triphosphatas	0.11	3	1.1235955	152	0.4389638
3382	GO:0004768 GO:0016214	stearoyl-CoA 9-desaturas	0.12	1	0.37453184	16	0.046206716
7521	GO:0010295	(+)-abscisic acid 8'-hydro	0.12	1	0.37453184	16	0.046206716
9189	GO:0015929	hexosaminidase activity	0.12	1	0.37453184	16	0.046206716
9427	GO:0016215	CoA desaturase activity	0.12	1	0.37453184	16	0.046206716
19338	GO:0043022 GO:0030376	ribosome binding	0.12	1	0.37453184	16	0.046206716
15392	GO:0032991	macromolecular complex	0.12	17	6.367041	1616	4.666878
3885	GO:0005525	GTP binding	0.12	4	1.4981273	245	0.70754033
11032	GO:0019001	guanyl nucleotide binding	0.12	4	1.4981273	245	0.70754033
14967	GO:0032561	guanyl ribonucleotide bind	0.12	4	1.4981273	245	0.70754033
9923	GO:0016892	endoribonuclease activity	0.12	1	0.37453184	17	0.049094636
9925	GO:0016894	endonuclease activity, ac	0.12	1	0.37453184	17	0.049094636
16281	GO:0033897	ribonuclease T2 activity	0.12	1	0.37453184	17	0.049094636
15189	GO:0032787	monocarboxylic acid meta	0.13	2	0.7490637	81	0.23392151
2659	GO:0003730	mRNA 3'-UTR binding	0.13	1	0.37453184	18	0.051982556
4576	GO:0006417 GO:0006444	regulation of translation	0.13	1	0.37453184	18	0.051982556
5776	GO:0008252	nucleotidase activity	0.13	1	0.37453184	18	0.051982556
8469	GO:0015036	disulfide oxidoreductase	0.13	1	0.37453184	18	0.051982556
2658	GO:0003729	mRNA binding	0.13	2	0.7490637	82	0.23680943
3290	GO:0004656	procollagen-proline 4-diox	0.14	1	0.37453184	19	0.054870475
11752	GO:0019798	procollagen-proline diox	0.14	1	0.37453184	19	0.054870475
13966	GO:0031543	peptidyl-proline dioxygena	0.14	1	0.37453184	19	0.054870475
13968	GO:0031545	peptidyl-proline 4-dioxyme	0.14	1	0.37453184	19	0.054870475
2627	GO:0003676	nucleic acid binding	0.14	24	8.988764	2453	7.0840673
4327	GO:0006091	generation of precursor m	0.14	2	0.7490637	84	0.24258527
18000	GO:0035639	purine ribonucleoside triph	0.14	9	3.3707864	769	2.2208104
4027	GO:0005737	cytoplasm	0.14	20	7.490637	2001	5.7787275
9784	GO:0016723	oxidoreductase activity, o	0.14	1	0.37453184	20	0.0577584
225	GO:0000293	ferric-chelate reductase a	0.14	1	0.37453184	20	0.0577584
3341	GO:0004722 GO:0000158	protein serine/threonine p	0.15	3	1.1235955	171	0.4938343
3156	GO:0004497	monooxygenase activity	0.15	3	1.1235955	172	0.49672222
4605	GO:0006457 GO:0007022	protein folding	0.15	3	1.1235955	173	0.49961013
9768	GO:0016706	oxidoreductase activity, a	0.15	3	1.1235955	175	0.505386
3831	GO:0005385	zinc ion transmembrane t	0.16	1	0.37453184	22	0.06353424
4882	GO:0006778	porphyrin metabolic proces	0.16	1	0.37453184	22	0.06353424
4883	GO:0006779	porphyrin biosynthetic pro	0.16	1	0.37453184	22	0.06353424
4924	GO:0006829	zinc ion transport	0.16	1	0.37453184	22	0.06353424
7823	GO:0010608	posttranscriptional regulat	0.16	1	0.37453184	22	0.06353424
29941	GO:0071577	zinc ion transmembrane t	0.16	1	0.37453184	22	0.06353424
5693	GO:0008135	translation factor activity	0.16	2	0.7490637	92	0.26568863
14959	GO:0032553	ribonucleotide binding	0.16	9	3.3707864	795	2.2558963

14961	GO:0032555	purine ribonucleotide bind	0.16	9	3.3707864	795	2.2958963
10033	GO:0017076	purine nucleotide binding	0.17	9	3.3707864	797	2.3016722
3262	GO:0004622 GO:0045128	lysophospholipase activit	0.17	24	0.37453184	24	0.06931008
8559	GO:0015146	pentose transmembrane t	0.17	1	0.37453184	24	0.06931008
8561	GO:0015148	D-xylose transmembrane	0.17	1	0.37453184	24	0.06931008
8829	GO:0015519	D-xylose:hydrogen sympo	0.17	1	0.37453184	24	0.06931008
9019	GO:0015750	pentose transport	0.17	1	0.37453184	24	0.06931008
9022	GO:0015753	D-xylose transport	0.17	1	0.37453184	24	0.06931008
9779	GO:0016717	oxidoreductase activity, a	0.17	1	0.37453184	24	0.06931008
13657	GO:0031225	anchored to membrane	0.17	1	0.37453184	24	0.06931008
25578	GO:0051287 GO:0051288	NAD binding	0.17	1	0.37453184	24	0.06931008
22357	GO:0046854 GO:004683	phosphatidylinositol phos	0.18	1	0.37453184	25	0.072197996
19393	GO:0043086	negative regulation of cat	0.18	3	1.1235955	188	0.54292893
20342	GO:0044092	negative regulation of mo	0.18	3	1.1235955	188	0.54292893
3415	GO:0004805	trehalose-phosphatase ac	0.18	1	0.37453184	26	0.075085916
9884	GO:0016847 GO:0034100	1-aminocyclopropane-1-c	0.18	1	0.37453184	26	0.075085916
10911	GO:0018871	1-aminocyclopropane-1-c	0.18	1	0.37453184	26	0.075085916
18579	GO:0042218	1-aminocyclopropane-1-c	0.18	1	0.37453184	26	0.075085916
30689	GO:0072330	monocarboxylic acid bios	0.18	1	0.37453184	26	0.075085916
24968	GO:0050662	coenzyme binding	0.18	3	1.1235955	191	0.5515927
9541	GO:0016413	O-acetyltransferase activi	0.19	1	0.37453184	27	0.077973835
22340	GO:0046834	lipid phosphorylation	0.19	1	0.37453184	27	0.077973835
1029	GO:0001727	lipid kinase activity	0.19	1	0.37453184	27	0.077973835
9238	GO:0015980	energy derivation by oxid	0.19	1	0.37453184	28	0.080861755
19337	GO:0043021	ribonucleoprotein binding	0.20	1	0.37453184	29	0.083749674
2870	GO:0004064	arylesterase activity	0.21	1	0.37453184	30	0.086637594
3009	GO:0004322	ferroxidase activity	0.21	1	0.37453184	30	0.086637594
9785	GO:0016724	oxidoreductase activity, o	0.21	1	0.37453184	30	0.086637594
15414	GO:0033013	tetrapyrrole metabolic pro	0.21	1	0.37453184	30	0.086637594
15415	GO:0033014	tetrapyrrole biosynthetic p	0.21	1	0.37453184	30	0.086637594
3626	GO:0005083	small GTPase regulator, a	0.21	2	0.7490637	111	0.3205591
14422	GO:0032012	regulation of ARF protein	0.21	1	0.37453184	31	0.08952551
14720	GO:0032312	regulation of ARF GTPase	0.21	1	0.37453184	31	0.08952551
29918	GO:0071554	cell wall organization or bi	0.21	2	0.7490637	112	0.32344702
3265	GO:0004630	phospholipase D activity	0.22	1	0.37453184	32	0.09241343
4757	GO:0006633 GO:000003	fatty acid biosynthetic pro	0.22	1	0.37453184	32	0.09241343
6942	GO:0009674	potassium:sodium sympo	0.22	1	0.37453184	32	0.09241343
12522	GO:0022820	potassium ion symporter	0.22	1	0.37453184	32	0.09241343
21041	GO:0045431	flavonol synthase activity	0.22	1	0.37453184	32	0.09241343
25836	GO:0051552	flavone metabolic process	0.22	1	0.37453184	32	0.09241343
25837	GO:0051553	flavone biosynthetic proc	0.22	1	0.37453184	32	0.09241343
25838	GO:0051554	flavonol metabolic proces	0.22	1	0.37453184	32	0.09241343
25839	GO:0051555	flavonol biosynthetic proc	0.22	1	0.37453184	32	0.09241343
7229	GO:0009987 GO:000815	cellular process	0.22	88	32.9588	10601	30.614838
18956	GO:0042626	ATPase activity, coupled	0.22	3	1.1235955	211	0.6093511
9861	GO:0016820	hydrolase activity, actin	0.22	3	1.1235955	212	0.612239
24966	GO:0050660	flavin adenine dinucleotid	0.23	2	0.7490637	118	0.34077454
11206	GO:0019203	carbohydrate phosphatas	0.24	1	0.37453184	35	0.10107719
12817	GO:0030258	lipid modification	0.24	1	0.37453184	35	0.10107719
22012	GO:0046488 GO:003038	phosphatidylinositol meta	0.24	1	0.37453184	35	0.10107719
4232	GO:0005992	trehalose biosynthetic pro	0.24	1	0.37453184	36	0.10396511
9393	GO:0016165	lipoxygenase activity	0.24	1	0.37453184	36	0.10396511
3260	GO:0004620	phospholipase activity	0.25	2	0.7490637	123	0.35521415
25485	GO:0051188	cofactor biosynthetic proc	0.25	2	0.7490637	123	0.35521415
20488	GO:0044238	primary metabolic process	0.25	76	28.46442	9167	26.47356
4231	GO:0005991	trehalose metabolic proces	0.25	1	0.37453184	38	0.10974095
7072	GO:0009813	flavonoid biosynthetic pro	0.27	1	0.37453184	40	0.1155168
4851	GO:0006733	oxidoreduction coenzyme	0.27	1	0.37453184	41	0.118404716
19758	GO:0043492	ATPase activity, coupled	0.27	3	1.1235955	235	0.67866117
3877	GO:0005516	calmodulin binding	0.27	3	1.1235955	236	0.6815491
2653	GO:0003723	RNA binding	0.27	8	2.9962547	797	2.3016722
4756	GO:0006631	fatty acid metabolic proces	0.28	1	0.37453184	42	0.121292636
6666	GO:0009312	oligosaccharide biosynthe	0.28	1	0.37453184	42	0.121292636
9370	GO:0016138	glycoside biosynthetic pro	0.28	1	0.37453184	42	0.121292636
21880	GO:0046351	disaccharide biosynthetic	0.28	1	0.37453184	42	0.121292636
14676	GO:0032268	regulation of cellular prote	0.28	1	0.37453184	43	0.124180555
25538	GO:0051246	regulation of protein meta	0.28	1	0.37453184	43	0.124180555
7071	GO:0009812	flavonoid metabolic proces	0.29	1	0.37453184	44	0.12706847
9753	GO:0016682	oxidoreductase activity, a	0.29	1	0.37453184	44	0.12706847
4942	GO:0006855	drug transmembrane tran	0.29	2	0.7490637	139	0.40142086
8642	GO:0015238 GO:001523	drug transmembrane tran	0.29	2	0.7490637	139	0.40142086
9154	GO:0015893	drug transport	0.29	2	0.7490637	139	0.40142086
18832	GO:0042493 GO:001703	response to drug	0.29	2	0.7490637	139	0.40142086
31431	GO:0008004	low affinity nitrate transme	0.29	1	0.37453184	45	0.1299564
13164	GO:0030695	GTPase regulator activity	0.30	2	0.7490637	142	0.4100846
20512	GO:0044262 GO:000609	cellular carbohydrate met	0.30	3	1.1235955	248	0.7162041
9396	GO:0016168	chlorophyll binding	0.30	1	0.37453184	46	0.13284431
4773	GO:0006650 GO:000665	glycerophospholipid meta	0.31	1	0.37453184	47	0.13573223
8497	GO:0015079 GO:002281	potassium ion transmembr	0.31	1	0.37453184	47	0.13573223
22010	GO:0046486	glycerolipid metabolic pro	0.31	1	0.37453184	47	0.13573223
3307	GO:0004675	transmembrane receptor	0.31	4	1.4981273	367	1.0598665
31421	GO:0080044	quercetin 7-O-glucosyltra	0.32	1	0.37453184	49	0.14150807
9829	GO:0016779	nucleotidyltransferase act	0.32	2	0.7490637	148	0.42741212
8749	GO:0015399	primary active transmembr	0.32	3	1.1235955	260	0.75085914
8753	GO:0015405	P-P-bond-hydrolysis-drive	0.32	3	1.1235955	260	0.75085914
4897	GO:0006793	phosphorus metabolic proc	0.32	25	9.363296	2925	8.4471655
4900	GO:0006796	phosphate metabolic proc	0.32	25	9.363296	2925	8.4471655
3099	GO:0004428	inositol or phosphatidylin	0.33	1	0.37453184	51	0.14728391
3293	GO:0004659	prenyltransferase activity	0.33	1	0.37453184	51	0.14728391
8908	GO:0015629	actin cytoskeleton	0.33	1	0.37453184	51	0.14728391
18541	GO:0042180	cellular ketone metabolic	0.33	4	1.4981273	375	1.0829699
2809	GO:0003993	acid phosphatase activity	0.33	1	0.37453184	52	0.15017183
6965	GO:0009699	phenylpropanoid biosynth	0.33	1	0.37453184	52	0.15017183
6424	GO:0009055 GO:000905	electron carrier activity	0.33	2	0.7490637	154	0.44473964
131	GO:0000166	nucleotide binding	0.33	11	4.11985	1213	3.5030468
9750	GO:0016679	oxidoreductase activity, a	0.34	1	0.37453184	53	0.15305975
9699	GO:0016616	oxidoreductase activity, a	0.34	3	1.1235955	266	0.7681867
3464	GO:0004857	enzyme inhibitor activity	0.34	2	0.7490637	157	0.4534034
17918	GO:0035556 GO:000724	intracellular signal transdu	0.34	1	0.37453184	54	0.15594767
4224	GO:0005984	disaccharide metabolic pr	0.35	1	0.37453184	56	0.16172351
9369	GO:0016137	glycoside metabolic proces	0.35	1	0.37453184	56	0.16172351
9883	GO:0016846	carbon-sulfur lyase activit	0.35	1	0.37453184	56	0.16172351
6441	GO:0009072	aromatic amino acid fami	0.36	1	0.37453184	57	0.16461143
25483	GO:0051186	cofactor metabolic proces	0.36	2	0.7490637	164	0.47361887
6665	GO:0009311	oligosaccharide metabol	0.36	1	0.37453184	58	0.16749935
8558	GO:0015145	monosaccharide transme	0.36	1	0.37453184	58	0.16749935
9018	GO:0015749	monosaccharide transpor	0.36	1	0.37453184	58	0.16749935
18981	GO:0042651	thylakoid membrane	0.37	1	0.37453184	59	0.17038727
2980	GO:0004185	serine-type carboxypeptid	0.37	1	0.37453184	60	0.17327519
5652	GO:0008081 GO:000443	phosphonic diester hydro	0.37	1	0.37453184	60	0.17327519
6964	GO:0009698	phenylpropanoid metabol	0.37	1	0.37453184	60	0.17327519
28375	GO:0070008	serine-type exopeptidase	0.37	1	0.37453184	60	0.17327519
4768	GO:0006644	phospholipid metabolic pr	0.38	1	0.37453184	61	0.1761631

8526	GO:0015112	nitrate transmembrane tra	0.38	1	0.37453184	61	0.1761631
8975	GO:0015706GO:0006872	nitrate transport	0.38	1	0.37453184	61	0.1761631
3884	GO:0005524	ATP binding	0.38	5	1.8726592	524	1.51327
2978	GO:0004180	carboxypeptidase activity	0.38	1	0.37453184	62	0.17905103
17457	GO:0035091	phosphatidylinositol bindi	0.38	1	0.37453184	62	0.17905103
8675	GO:0015293	symporter activity	0.39	2	0.7490637	173	0.49961013
5704	GO:0008150GO:0000004	biological process	0.39	174	65.16854	22215	64.155136
22416	GO:0046915	transition metal ion transp	0.39	1	0.37453184	64	0.18482687
9697	GO:0016614	oxidoreductase activity, a	0.39	3	1.1235955	293	0.84616053
11616	GO:0019637	organophosphate metabo	0.40	1	0.37453184	65	0.18771479
25314	GO:0051015	actin filament binding	0.40	1	0.37453184	65	0.18771479
18953	GO:0042623	ATPase activity, coupled	0.40	5	1.8726592	537	1.550813
3180	GO:0004521	endoribonuclease activity	0.40	1	0.37453184	66	0.1906027
9765	GO:0016702	oxidoreductase activity, a	0.40	1	0.37453184	66	0.1906027
9837	GO:0016788	hydrolase activity, acting	0.40	13	4.8689137	1534	4.430069
4572	GO:0006412GO:0006411	translation	0.40	2	0.7490637	180	0.5198256
32	GO:0000041	transition metal ion transp	0.41	1	0.37453184	68	0.19637854
5610	GO:0008026	ATP-dependent helicase	0.41	2	0.7490637	183	0.52848935
28401	GO:0070035	purine NTP-dependent he	0.41	2	0.7490637	183	0.52848935
20505	GO:0044255	cellular lipid metabolic pro	0.42	2	0.7490637	184	0.53137726
4844	GO:0006725	cellular aromatic compou	0.42	2	0.7490637	185	0.53426516
9486	GO:0016298	lipase activity	0.42	2	0.7490637	185	0.53426516
5726	GO:0008187	poly-pyrimidine tract bindi	0.42	1	0.37453184	70	0.20215438
5788	GO:0008266	poly(U) RNA binding	0.42	1	0.37453184	70	0.20215438
23522	GO:0048046	apoplast	0.42	1	0.37453184	70	0.20215438
13041	GO:0030554	adenyl nucleotide binding	0.42	5	1.8726592	550	1.5883559
14965	GO:0032559	adenyl ribonucleotide bind	0.42	5	1.8726592	550	1.5883559
6475	GO:0009108	coenzyme biosynthetic pr	0.43	1	0.37453184	72	0.20793022
9764	GO:0016701	oxidoreductase activity, a	0.43	1	0.37453184	72	0.20793022
3068	GO:0004386	helicase activity	0.43	2	0.7490637	189	0.54581684
3306	GO:0004674GO:0004699	protein serine/threonine k	0.43	9	3.3707864	1062	3.0669708
3311	GO:0004683GO:0004684	calmodulin-dependent pro	0.44	1	0.37453184	74	0.21370606
25510	GO:0051213	dioxygenase activity	0.44	1	0.37453184	75	0.21659398
28365	GO:0065008	regulation of biological qu	0.44	3	1.1235955	316	0.9125827
2897	GO:0004091GO:0004302	carboxylesterase activity	0.44	2	0.7490637	194	0.5602564
2819	GO:0004004	ATP-dependent RNA heli	0.45	1	0.37453184	78	0.22525774
5725	GO:0008186GO:0004011	RNA-dependent ATPase	0.45	1	0.37453184	78	0.22525774
30865	GO:0072509	divalent inorganic cation t	0.45	1	0.37453184	78	0.22525774
2654	GO:0003724	RNA helicase activity	0.46	1	0.37453184	80	0.2310336
23515	GO:0048037	cofactor binding	0.46	3	1.1235955	327	0.94434977
29202	GO:0070838	divalent metal ion transpo	0.47	1	0.37453184	82	0.23680943
16738	GO:0034357	photosynthetic membrane	0.47	1	0.37453184	83	0.23969735
4954	GO:0006869	lipid transport	0.48	2	0.7490637	208	0.6006873
8085	GO:0010876	lipid localization	0.48	2	0.7490637	208	0.6006873
4912	GO:0006813GO:0015456	potassium ion transport	0.48	1	0.37453184	84	0.24258527
30168	GO:0071804	cellular potassium ion tra	0.48	1	0.37453184	84	0.24258527
30169	GO:0071805	potassium ion transmembr	0.48	1	0.37453184	84	0.24258527
30867	GO:0072511	divalent inorganic cation t	0.48	1	0.37453184	84	0.24258527
9295	GO:0016053	organic acid biosynthetic	0.49	2	0.7490637	211	0.6093511
21058	GO:0045454GO:0030503	cell redox homeostasis	0.49	2	0.7490637	211	0.6093511
21922	GO:0046394	carboxylic acid biosynthe	0.49	2	0.7490637	211	0.6093511
5768	GO:0008238	exopeptidase activity	0.49	1	0.37453184	86	0.24836111
22376	GO:0046873	metal ion transmembrane	0.49	2	0.7490637	213	0.6151269
20624	GO:0044430	cytoskeletal part	0.49	1	0.37453184	88	0.25413695
20630	GO:0044436	thylakoid part	0.50	1	0.37453184	90	0.2599128
17617	GO:0035251	UDP-glucosyltransferase	0.50	2	0.7490637	218	0.62956655
3644	GO:0005102	receptor binding	0.51	1	0.37453184	91	0.2628007
3808	GO:0005351GO:0005403	sugar:hydrogen symporte	0.52	1	0.37453184	94	0.27146447
3835	GO:0005402	cation:sugar symporter ac	0.52	1	0.37453184	94	0.27146447
6863	GO:0009579	thylakoid	0.52	1	0.37453184	94	0.27146447
10058	GO:0017111	nucleoside-triphosphatase	0.52	7	2.621723	878	2.5355935
3472	GO:0004866	endopeptidase inhibitor a	0.52	1	0.37453184	95	0.27435237
8159	GO:0010951	negative regulation of end	0.52	1	0.37453184	95	0.27435237
11712	GO:0019748	secondary metabolic prod	0.52	1	0.37453184	95	0.27435237
26712	GO:0052548	regulation of endopeptidase	0.52	1	0.37453184	95	0.27435237
28101	GO:0061135	endopeptidase regulator s	0.52	1	0.37453184	95	0.27435237
6796	GO:0009507	chloroplast	0.53	2	0.7490637	229	0.6613336
13531	GO:0031072	heat shock protein binding	0.53	2	0.7490637	230	0.6642216
8677	GO:0015295	solute:hydrogen symporte	0.53	1	0.37453184	98	0.28301615
25379	GO:0051082	unfolded protein binding	0.53	1	0.37453184	98	0.28301615
4612	GO:0006468	protein phosphorylation	0.54	17	6.367041	2205	6.367063
11695	GO:0019725	cellular homeostasis	0.54	2	0.7490637	234	0.67577326
4320	GO:0006082	organic acid metabolic pro	0.54	3	1.1235955	369	1.0656425
11716	GO:0019752	carboxylic acid metabolic	0.54	3	1.1235955	369	1.0656425
19707	GO:0043436	oxoacid metabolic proces	0.54	3	1.1235955	369	1.0656425
11202	GO:0019199	transmembrane receptor	0.55	4	1.4981273	504	1.4555116
5874	GO:0008374	O-acyltransferase activity	0.55	1	0.37453184	102	0.29456782
18925	GO:0042592	homeostatic process	0.55	2	0.7490637	238	0.68732494
4405	GO:0006195	purine nucleotide cataboli	0.55	6	2.247191	773	2.232362
6508	GO:0009143	nucleoside triphosphate c	0.55	6	2.247191	773	2.232362
6509	GO:0009144	purine nucleoside triphos	0.55	6	2.247191	773	2.232362
6511	GO:0009146	purine nucleoside triphos	0.55	6	2.247191	773	2.232362
6519	GO:0009154	purine ribonucleotide cata	0.55	6	2.247191	773	2.232362
6530	GO:0009166	nucleotide catabolic proce	0.55	6	2.247191	773	2.232362
6567	GO:0009203	ribonucleoside triphospha	0.55	6	2.247191	773	2.232362
6569	GO:0009205	purine ribonucleoside triph	0.55	6	2.247191	773	2.232362
6571	GO:0009207	purine ribonucleoside triph	0.55	6	2.247191	773	2.232362
6624	GO:0009261	ribonucleotide catabolic p	0.55	6	2.247191	773	2.232362
17034	GO:0034655	nucleobase, nucleoside, r	0.55	6	2.247191	773	2.232362
17035	GO:0034656	nucleobase, nucleoside a	0.55	6	2.247191	773	2.232362
22209	GO:0046700	heterocycle catabolic pro	0.55	6	2.247191	773	2.232362
30879	GO:0072523	purine-containing compou	0.55	6	2.247191	773	2.232362
4408	GO:0006200	ATP catabolic process	0.55	5	1.8726592	641	1.8511566
9918	GO:0016887GO:0004002	ATPase activity	0.55	5	1.8726592	641	1.8511566
21600	GO:0046034	ATP metabolic process	0.55	5	1.8726592	641	1.8511566
19525	GO:0043226	organelle	0.55	23	8.614232	3013	8.701303
19528	GO:0043229	intracellular organelle	0.55	23	8.614232	3013	8.701303
9709	GO:0016627	oxidoreductase activity, a	0.55	1	0.37453184	104	0.30034366
20520	GO:0044270	cellular nitrogen compou	0.56	6	2.247191	777	2.2439137
2668	GO:0003779	actin binding	0.56	1	0.37453184	105	0.3032316
3195	GO:0004540	ribonuclease activity	0.56	1	0.37453184	106	0.3061195
9493	GO:0016310	phosphorylation	0.56	19	7.116105	2504	7.2313514
6824	GO:0009536	plastid	0.57	2	0.7490637	247	0.7133162
6563	GO:0009199	ribonucleoside triphospha	0.57	6	2.247191	790	2.2814567
6515	GO:0009150	purine ribonucleotide met	0.57	6	2.247191	791	2.2843447
7690	GO:0010466	negative regulation of pep	0.57	1	0.37453184	110	0.31767118
12946	GO:0030414	peptidase inhibitor activity	0.57	1	0.37453184	110	0.31767118
25636	GO:0051346	negative regulation of hvd	0.57	1	0.37453184	110	0.31767118
6506	GO:0009141	nucleoside triphosphate n	0.58	6	2.247191	796	2.2987843
3304	GO:0004672GO:0050222	protein kinase activity	0.58	10	3.7453184	1333	3.8495972
26711	GO:0052547	regulation of peptidase ac	0.58	1	0.37453184	112	0.32344702
28100	GO:0061134	peptidase regulator activ	0.58	1	0.37453184	112	0.32344702
4850	GO:0006732GO:0006754	coenzyme metabolic proc	0.58	1	0.37453184	113	0.32633495

9535	GO:0016407	acetyltransferase activity	0.59	1	0.37453184	115	0.3321108
4373	GO:0006163	purine nucleotide metabo	0.60	6	2.247191	810	2.339215
26845	GO:0052689	carboxylic ester hydrolase	0.60	4	1.4981273	538	1.5537009
6622	GO:0009259 GO:000912	ribonucleotide metabolic p	0.60	6	2.247191	812	2.344991
9285	GO:0016043	cellular component organi	0.60	2	0.7490637	261	0.7537471
25416	GO:0051119	sugar transmembrane tra	0.60	1	0.37453184	118	0.34077454
9824	GO:0016773	phosphotransferase activ	0.60	11	4.11985	1493	4.311664
9579	GO:0016462	pyrophosphatase activity	0.61	7	2.621723	954	2.7550755
9859	GO:0016818	hydrolase activity, acting	0.61	7	2.621723	956	2.7608514
19126	GO:0042803	protein homodimerization	0.61	2	0.7490637	265	0.7652988
22007	GO:0046483	heterocycle metabolic pro	0.61	8	2.9962547	1094	3.1593843
9858	GO:0016817	hydrolase activity, acting	0.61	7	2.621723	959	2.769515
6884	GO:0009607	response to biotic stimuli	0.61	1	0.37453184	122	0.3523262
30877	GO:0072521	purine-containing compou	0.62	6	2.247191	827	2.3883097
22049	GO:0046527	glucosyltransferase activi	0.62	2	0.7490637	270	0.77973837
4121	GO:0005856	cytoskeleton	0.62	1	0.37453184	126	0.3638779
19125	GO:0042802	identical protein binding	0.63	5	1.8726592	697	2.01288
4649	GO:0006520 GO:000651	cellular amino acid metab	0.63	2	0.7490637	277	0.7998538
9823	GO:0016772	transferase activity, trans	0.63	14	5.243446	1932	5.579461
3874	GO:0005509	calcium ion binding	0.64	2	0.7490637	279	0.8057296
2758	GO:0003924	GTPase activity	0.64	1	0.37453184	132	0.3812054
4394	GO:0006184	GTP catabolic process	0.64	1	0.37453184	132	0.3812054
21605	GO:0046039	GTP metabolic process	0.64	1	0.37453184	132	0.3812054
4215	GO:0005975	carbohydrate metabolic p	0.64	7	2.621723	990	2.8590407
3490	GO:0004888 GO:000492	transmembrane receptor	0.64	4	1.4981273	571	1.6490022
20532	GO:0044282	small molecule catabolic	0.65	6	2.247191	854	2.4662836
30205	GO:0071841	cellular component organi	0.65	2	0.7490637	285	0.8230572
9811	GO:0016757 GO:001693	transferase activity, trans	0.66	5	1.8726592	729	2.1052935
6046	GO:0008610	lipid biosynthetic process	0.67	1	0.37453184	141	0.4071967
8676	GO:0015294	solute:cation symporter at	0.67	1	0.37453184	141	0.4071967
8557	GO:0015144	carbohydrate transmembr	0.67	1	0.37453184	143	0.41297254
16602	GO:0034219	carbohydrate transmembr	0.67	1	0.37453184	143	0.41297254
3873	GO:0005507	copper ion binding	0.68	1	0.37453184	146	0.42163628
20356	GO:0044106	cellular amine metabolic p	0.68	2	0.7490637	303	0.8750397
6071	GO:0008643 GO:000686	carbohydrate transport	0.68	1	0.37453184	147	0.42452422
20517	GO:0044267	cellular protein metabolic	0.68	23	8.614232	3225	9.313541
9801	GO:0016747	transferase activity, trans	0.69	3	1.1235955	456	1.3168914
11426	GO:0019438	aromatic compound biosy	0.69	1	0.37453184	149	0.43030006
20498	GO:0044248	cellular catabolic process	0.69	6	2.247191	894	2.5818002
9488	GO:0016301	kinase activity	0.69	12	4.494382	1740	5.0249805
3200	GO:0004553 GO:001680	hydrolase activity, hydroly	0.70	2	0.7490637	312	0.90103096
5791	GO:0008270	zinc ion binding	0.70	13	4.8689137	1880	5.4292893
8517	GO:0015103	inorganic anion transmem	0.70	1	0.37453184	154	0.44473964
11224	GO:0019222	regulation of metabolic pr	0.70	22	8.2397	3115	8.995871
6662	GO:0009306	amine metabolic process	0.70	2	0.7490637	314	0.9068066
13656	GO:0031224	intrinsic to membrane	0.70	8	2.9962547	1193	3.4452884
2975	GO:0004175 GO:001680	endopeptidase activity	0.71	2	0.7490637	320	0.9241344
4867	GO:0006753	nucleoside phosphate me	0.71	6	2.247191	914	2.6395588
6484	GO:0009117	nucleotide metabolic proc	0.71	6	2.247191	914	2.6395588
5732	GO:0008194	UDP-glycosyltransferase	0.71	2	0.7490637	322	0.9299102
18582	GO:0042221	response to chemical stim	0.72	2	0.7490637	328	0.94723773
12572	GO:0022890 GO:001508	inorganic cation transmem	0.73	2	0.7490637	332	0.9587894
12516	GO:0022804	active transmembrane tra	0.73	5	1.8726592	787	2.2727928
20618	GO:0044424	intracellular part	0.73	27	10.11236	3853	11.127155
6077	GO:0008652	cellular amino acid biosyn	0.73	1	0.37453184	169	0.48805845
26932	GO:0055086	nucleobase, nucleoside a	0.74	6	2.247191	944	2.7261963
9800	GO:0016746	transferase activity, trans	0.74	3	1.1235955	498	1.438184
4067	GO:0005783	endoplasmic reticulum	0.74	1	0.37453184	174	0.50249803
20619	GO:0044425	membrane part	0.74	10	3.7453184	1523	4.398302
8967	GO:0015698	inorganic anion transport	0.74	1	0.37453184	176	0.5082739
20533	GO:0044283	small molecule biosynthe	0.75	2	0.7490637	347	1.0021082
6166	GO:0008757	S-adenosylmethionine-de	0.75	1	0.37453184	180	0.5198256
5195	GO:0007165 GO:002303	signal transduction	0.75	6	2.247191	961	2.775291
12602	GO:0023052 GO:002304	signaling	0.75	6	2.247191	961	2.775291
6663	GO:0009309	amine biosynthetic proces	0.75	1	0.37453184	181	0.5227135
9818	GO:0016765 GO:001676	transferase activity, trans	0.76	1	0.37453184	185	0.53426516
22479	GO:0046983	protein dimerization activi	0.76	3	1.1235955	517	1.4930545
3476	GO:0004872 GO:001904	receptor activity	0.76	4	1.4981273	672	1.9406822
2657	GO:0003727 GO:000372	single-stranded RNA bind	0.77	1	0.37453184	188	0.54292893
30204	GO:0071840	cellular component organi	0.77	2	0.7490637	362	1.045427
30066	GO:0071702	organic substance transp	0.78	3	1.1235955	529	1.5277096
20521	GO:0044271	cellular nitrogen compou	0.78	2	0.7490637	367	1.0598665
31465	GO:0080090	regulation of primary meta	0.78	18	6.741573	2710	7.826263
28378	GO:0070011	peptidase activity, acting	0.79	3	1.1235955	537	1.550813
12608	GO:0030001	metal ion transport	0.79	2	0.7490637	374	1.080082
5840	GO:0008324	cation transmembrane tra	0.79	3	1.1235955	538	1.5537009
10244	GO:0018130	heterocycle biosynthetic p	0.79	1	0.37453184	199	0.57469606
9836	GO:0016787	hydrolase activity	0.80	25	9.363296	3723	10.751725
8943	GO:0015672	monovalent inorganic cati	0.80	2	0.7490637	383	1.1060733
9266	GO:0016020	membrane	0.80	25	9.363296	3741	10.803708
13753	GO:0031323	regulation of cellular meta	0.81	18	6.741573	2770	7.999538
5766	GO:0008236	serine-type peptidase acti	0.81	1	0.37453184	214	0.6180149
8495	GO:0015077	monovalent inorganic cati	0.81	1	0.37453184	214	0.6180149
25094	GO:0050799 GO:005079	regulation of biological pr	0.81	29	10.8614235	4315	12.461374
4609	GO:0006464	protein modification proc	0.81	18	6.741573	2781	8.031305
15436	GO:0033036	macromolecule localizati	0.81	2	0.7490637	397	1.1465042
5763	GO:0008233	peptidase activity	0.81	3	1.1235955	565	1.6316746
9845	GO:0016798	hydrolase activity, acting	0.82	2	0.7490637	401	1.1580559
4558	GO:0006396 GO:000639	RNA processing	0.82	1	0.37453184	219	0.63245445
20531	GO:0044281	small molecule metabolic	0.82	11	4.11985	1788	5.1636004
10103	GO:0017171	serine hydrolase activity	0.82	1	0.37453184	220	0.63534236
6425	GO:0009056	catabolic process	0.82	6	2.247191	1051	3.0352037
8673	GO:0015291 GO:001529	secondary active transme	0.82	2	0.7490637	407	1.1753833
11221	GO:0019219	regulation of nucleobase,	0.83	17	6.367041	2675	7.7251854
25468	GO:0051171	regulation of nitrogen com	0.83	17	6.367041	2675	7.7251854
4990	GO:0006915 GO:000863	apoptosis	0.83	1	0.37453184	227	0.6555578
28364	GO:00065007	biological regulation	0.83	29	10.8614235	4376	12.637537
4755	GO:0006629	lipid metabolic process	0.84	3	1.1235955	590	1.7038727
9906	GO:0016874	ligase activity	0.84	3	1.1235955	597	1.7240882
11828	GO:0019899	enzyme binding	0.84	1	0.37453184	237	0.684437
5756	GO:0008219	cell death	0.84	1	0.37453184	239	0.69021285
8209	GO:0012501 GO:001624	programmed cell death	0.84	1	0.37453184	239	0.69021285
9462	GO:0016265	death	0.84	1	0.37453184	239	0.69021285
25098	GO:0050794 GO:005124	regulation of cellular proc	0.84	26	9.737827	3987	11.514136
11522	GO:0019538 GO:000641	protein metabolic process	0.85	27	10.11236	4134	11.938661
5712	GO:0008168 GO:000448	methyltransferase activity	0.85	1	0.37453184	244	0.7046524
5981	GO:0008509	anion transmembrane tra	0.85	1	0.37453184	245	0.70754033
4917	GO:0006820 GO:000682	anion transport	0.85	1	0.37453184	247	0.7133162
5661	GO:0008092	cytoskeletal protein bindi	0.86	1	0.37453184	249	0.719092
12805	GO:0030246	carbohydrate binding	0.86	1	0.37453184	251	0.7248679
3475	GO:0004871 GO:000506	signal transducer activity	0.86	4	1.4981273	787	2.2727928
27063	GO:0060089	molecular transducer acti	0.86	4	1.4981273	787	2.2727928
19684	GO:0043412	macromolecule modificati	0.86	18	6.741573	2900	8.374968

9795	GO:0016740	transferase activity	0.86	24	8.988764	3764	10.870131
9796	GO:0016741	transferase activity, transf	0.87	1	0.37453184	261	0.7537471
25998	GO:0051716	cellular response to stimu	0.88	6	2.247191	1138	3.2864528
8494	GO:0015075	ion transmembrane transp	0.88	4	1.4981273	827	2.3883097
16603	GO:0034220	ion transmembrane transp	0.89	4	1.4981273	833	2.4056373
4911	GO:0006812 GO:0006819	cation transport	0.89	3	1.1235955	662	1.9118029
14667	GO:0032259	methylation	0.89	1	0.37453184	285	0.8230572
4916	GO:0006818	hydrogen transport	0.90	1	0.37453184	292	0.84327257
9246	GO:0015992	proton transport	0.90	1	0.37453184	292	0.84327257
9812	GO:0016758	transferase activity, trans	0.90	2	0.7490637	501	1.4468478
22415	GO:0046914	transition metal ion bindin	0.91	15	5.6179776	2599	7.5057034
7141	GO:0009889	regulation of biosynthetic	0.91	15	5.6179776	2605	7.523031
7772	GO:0010556	regulation of macromolec	0.91	15	5.6179776	2605	7.523031
13756	GO:0031326	regulation of cellular bios	0.91	15	5.6179776	2605	7.523031
32213	GO:2000112	regulation of cellular mac	0.91	15	5.6179776	2605	7.523031
20640	GO:0044446	intracellular organelle par	0.91	3	1.1235955	710	2.0504231
20616	GO:0044422	organelle part	0.91	3	1.1235955	712	2.0561988
7692	GO:0010468	regulation of gene expres	0.92	15	5.6179776	2635	7.6096687
4849	GO:0006730 GO:0019753	one-carbon metabolic pro	0.92	1	0.37453184	325	0.93857396
3449	GO:0004842 GO:0004844	ubiquitin-protein ligase ac	0.92	1	0.37453184	326	0.94146186
27228	GO:0060255	regulation of macromolec	0.92	15	5.6179776	2660	7.6818666
5909	GO:0008415	acyltransferase activity	0.92	1	0.37453184	330	0.95301354
2643	GO:0003700 GO:0001330	sequence-specific DNA b	0.92	7	2.621723	1417	4.0921826
716	GO:0001071	nucleic acid binding trans	0.92	7	2.621723	1417	4.0921826
9654	GO:0016567	protein ubiquitination	0.92	1	0.37453184	332	0.9587894
14854	GO:0032446	protein modification by sn	0.92	1	0.37453184	332	0.9587894
29011	GO:0070647	protein modification by sn	0.92	1	0.37453184	332	0.9587894
3903	GO:0005575 GO:0008372	cellular component	0.93	56	20.973783	8515	24.590637
22375	GO:0046872	metal ion binding	0.93	17	6.367041	2985	8.6204405
11747	GO:0019787 GO:0008639	small conjugating protein	0.93	1	0.37453184	339	0.9790048
9267	GO:0016021	integral to membrane	0.93	5	1.8726592	1103	3.1853757
19470	GO:0043167	ion binding	0.93	17	6.367041	2997	8.655096
19472	GO:0043169	cation binding	0.93	17	6.367041	2997	8.655096
2674	GO:0003824	catalytic activity	0.94	72	26.966291	10750	31.045137
3178	GO:0004519	endonuclease activity	0.94	1	0.37453184	356	1.0280994
4910	GO:0006811	ion transport	0.94	4	1.4981273	959	2.769515
4530	GO:0006355 GO:0032583	regulation of transcription	0.94	14	5.243446	2591	7.4826
25544	GO:0051252	regulation of RNA metabo	0.94	14	5.243446	2593	7.488376
4641	GO:0006508	proteolysis	0.94	4	1.4981273	965	2.7868426
12547	GO:0022857 GO:0005388	transmembrane transport	0.94	7	2.621723	1483	4.282785
22409	GO:0046906	tetrapyrrole binding	0.95	2	0.7490637	596	1.7212002
3723	GO:0005215 GO:0005478	transporter activity	0.95	9	3.3707864	1844	5.325324
9913	GO:0016881	acid-amino acid ligase ac	0.95	1	0.37453184	391	1.1291766
3945	GO:0005622	intracellular	0.95	28	10.486892	4751	13.720507
26931	GO:0055085	transmembrane transport	0.96	7	2.621723	1548	4.4705
25195	GO:0050896 GO:0051869	response to stimulus	0.96	9	3.3707864	1881	5.432177
3946	GO:0005623	cell	0.96	52	19.475655	8227	23.758917
20657	GO:0044464	cell part	0.96	52	19.475655	8227	23.758917
19533	GO:0043234	protein complex	0.96	3	1.1235955	848	2.448956
3177	GO:0004518	nuclease activity	0.96	1	0.37453184	427	1.2331418
12574	GO:0022892	substrate-specific transp	0.97	6	2.247191	1463	4.2250266
9911	GO:0016879	ligase activity, forming ca	0.97	1	0.37453184	456	1.3168914
4909	GO:0006810 GO:0015453	transport	0.97	11	4.11985	2315	6.6855345
25529	GO:0051234	establishment of localizat	0.97	11	4.11985	2315	6.6855345
25476	GO:0051179	localization	0.97	11	4.11985	2319	6.697086
3863	GO:0005488	binding	0.98	92	34.45693	13903	40.15075
9869	GO:0016829	lyase activity	0.98	1	0.37453184	488	1.4093049
11931	GO:0020037	heme binding	0.99	1	0.37453184	550	1.5883559
3955	GO:0005634	nucleus	0.99	5	1.8726592	1433	4.138389
12573	GO:0022891	substrate-specific transm	0.99	4	1.4981273	1241	3.5839086
3872	GO:0005506	iron ion binding	0.99	1	0.37453184	563	1.6258988
19526	GO:0043227	membrane-bounded orga	0.99	8	2.9962547	2142	6.185924
19530	GO:0043231	intracellular membrane-b	0.99	8	2.9962547	2142	6.185924
3876	GO:0005515 GO:0045308	protein binding	1.00	34	12.734082	6933	20.021948
2626	GO:0003674 GO:0005554	molecular_function	1.00	157	58.8015	24394	70.447914