

Table S5. Differentially regulated genes (up and down regulated) in the control compared with THyPRP silenced plants in FAZ at 12 h along with their expression values, fold changes, annotations, GO ids and terms.

Worksheet 2 & 3

Set4					
Line	Array	Details	Time	Treated vs. Con	Set
Control – New Yorker	254331010026_1_3	12h_7_AZ	12h	Control	Set 4
Control – New Yorker	254331010026_1_4	12h_8_AZ	12h		
TAPG + TPRP	254331010035_1_3	12h_43_AZ	12h	Treated	
TAPG + TPRP	254331010035_1_4	12h_44_AZ	12h		

**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
4h_TPRP_AZ vs. 4h_Control_AZ_Sense	1415	1392
4h_TPRP_AZ vs. 4h_Control_AZ_Antisense	536	872





































Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36	Q37	Q38	Q39	Q40	Q41	Q42	Q43	Q44	Q45	Q46	Q47	Q48	Q49	Q50	Q51	Q52	Q53	Q54	Q55	Q56	Q57	Q58	Q59	Q60	Q61	Q62	Q63	Q64	Q65	Q66	Q67	Q68	Q69	Q70	Q71	Q72	Q73	Q74	Q75	Q76	Q77	Q78	Q79	Q80	Q81	Q82	Q83	Q84	Q85	Q86	Q87	Q88	Q89	Q90	Q91	Q92	Q93	Q94	Q95	Q96	Q97	Q98	Q99	Q100
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36	Q37	Q38	Q39	Q40	Q41	Q42	Q43	Q44	Q45	Q46	Q47	Q48	Q49	Q50	Q51	Q52	Q53	Q54	Q55	Q56	Q57	Q58	Q59	Q60	Q61	Q62	Q63	Q64	Q65	Q66	Q67	Q68	Q69	Q70	Q71	Q72	Q73	Q74	Q75	Q76	Q77	Q78	Q79	Q80	Q81	Q82	Q83	Q84	Q85	Q86	Q87	Q88	Q89	Q90	Q91	Q92	Q93	Q94	Q95	Q96	Q97	Q98	Q99	Q100



Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36	Q37	Q38	Q39	Q40	Q41	Q42	Q43	Q44	Q45	Q46	Q47	Q48	Q49	Q50	Q51	Q52	Q53	Q54	Q55	Q56	Q57	Q58	Q59	Q60	Q61	Q62	Q63	Q64	Q65	Q66	Q67	Q68	Q69	Q70	Q71	Q72	Q73	Q74	Q75	Q76	Q77	Q78	Q79	Q80	Q81	Q82	Q83	Q84	Q85	Q86	Q87	Q88	Q89	Q90	Q91	Q92	Q93	Q94	Q95	Q96	Q97	Q98	Q99	Q100
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36	Q37	Q38	Q39	Q40	Q41	Q42	Q43	Q44	Q45	Q46	Q47	Q48	Q49	Q50	Q51	Q52	Q53	Q54	Q55	Q56	Q57	Q58	Q59	Q60	Q61	Q62	Q63	Q64	Q65	Q66	Q67	Q68	Q69	Q70	Q71	Q72	Q73	Q74	Q75	Q76	Q77	Q78	Q79	Q80	Q81	Q82	Q83	Q84	Q85	Q86	Q87	Q88	Q89	Q90	Q91	Q92	Q93	Q94	Q95	Q96	Q97	Q98	Q99	Q100







GO ID	GO ACCESSION	GO Term	p-value	Count in Selection	% Count in Selection	Count in Total	% Count in Total
8530	GO:0015116	sulfate transmembran	0.00	5	0.74294204	26	0.075085916
5793	GO:0008272 GO:000	sulfate transport	0.00	5	0.74294204	28	0.080861755
8736	GO:0015381	high affinity sulfate tra	0.00	4	0.5943536	18	0.051982556
5792	GO:0008271	secondary active sulfa	0.00	4	0.5943536	18	0.051982556
8584	GO:0015171 GO:0015	amino acid transmeml	0.00	9	1.3372957	118	0.34077454
2521	GO:0003333	amino acid transmeml	0.00	9	1.3372957	118	0.34077454
4951	GO:0006865 GO:0006	amino acid transport	0.00	9	1.3372957	123	0.35521415
3761	GO:0005275 GO:0005	amine transmembrane	0.00	9	1.3372957	126	0.3638779
9806	GO:0016752	sinapoyltransferase ac	0.00	4	0.5943536	23	0.06642216
9807	GO:0016753	O-sinapoyltransferase	0.00	4	0.5943536	23	0.06642216
9808	GO:0016754	sinapoylglucose-malat	0.00	4	0.5943536	23	0.06642216
9114	GO:0015849	organic acid transport	0.00	10	1.4858841	156	0.45051548
22443	GO:0046942	carboxylic acid transp	0.00	10	1.4858841	156	0.45051548
9600	GO:0016491	oxidoreductase activit	0.00	52	7.265973	1724	4.9787736
9103	GO:0015837	amine transport	0.00	9	1.3372957	135	0.38986918
3801	GO:0005342	organic acid transmem	0.00	9	1.3372957	136	0.3927571
22444	GO:0046943	carboxylic acid transr	0.00	9	1.3372957	136	0.3927571
5729	GO:0008191	metalloendopeptidase	0.00	2	0.2971768	4	0.011551679
23942	GO:0048551	metalloenzyme inhibi	0.00	2	0.2971768	4	0.011551679
7792	GO:0010576	metalloenzyme regula	0.00	2	0.2971768	4	0.011551679
8967	GO:0015698	inorganic anion transp	0.00	10	1.4858841	176	0.5082739
11827	GO:0019898 GO:0036	extrinsic to membrane	0.00	4	0.5943536	30	0.086637594
3884	GO:0005524	ATP binding	0.00	20	2.9717681	524	1.51327
21949	GO:0046424	ferulate 5-hydroxylase	0.00	2	0.2971768	5	0.0144396
7220	GO:0009973	adenyllyl-sulfate reduc	0.01	2	0.2971768	6	0.01732752
7690	GO:0010466	negative regulation of	0.01	7	1.0401188	110	0.31767118
12946	GO:0030414	peptidase inhibitor act	0.01	7	1.0401188	110	0.31767118
25636	GO:0051346	negative regulation of	0.01	7	1.0401188	110	0.31767118
13041	GO:0030554	adenyl nucleotide bind	0.01	20	2.9717681	550	1.5883559
14965	GO:0032559	adenyl ribonucleotide	0.01	20	2.9717681	550	1.5883559
12547	GO:0022857 GO:0005	transmembrane transp	0.01	43	6.389302	1483	4.282785
26711	GO:0052547	regulation of peptidase	0.01	7	1.0401188	112	0.32344702
28100	GO:0061134	peptidase regulator ac	0.01	7	1.0401188	112	0.32344702
26931	GO:0055085	transmembrane transp	0.01	44	6.53789	1548	4.4705
5981	GO:0008509	anion transmembrane	0.01	11	1.6344725	245	0.70754033
5704	GO:0008150 GO:0006	biological_process	0.01	461	68.49926	22215	64.155136
4917	GO:0006820 GO:0006	anion transport	0.01	11	1.6344725	247	0.7133162
26959	GO:0055114	oxidation-reduction pr	0.01	65	9.658247	2490	7.1909204
11776	GO:0019825	oxygen binding	0.01	15	2.228826	389	1.1234008
3472	GO:0004866	endopeptidase inhibi	0.01	6	0.89153045	95	0.27435237
8159	GO:0010951	negative regulation of	0.01	6	0.89153045	95	0.27435237
26712	GO:0052548	regulation of endopept	0.01	6	0.89153045	95	0.27435237
28101	GO:0061135	endopeptidase regulat	0.01	6	0.89153045	95	0.27435237
8517	GO:0015103	inorganic anion transp	0.01	8	1.1887072	154	0.44473964
3723	GO:0005215 GO:0005	transporter activity	0.01	50	7.4294205	1844	5.325324
19393	GO:0043086	negative regulation of	0.01	9	1.3372957	188	0.54292893
20342	GO:0044092	negative regulation of	0.01	9	1.3372957	188	0.54292893
3464	GO:0004857	enzyme inhibitor activ	0.01	8	1.1887072	157	0.4534034
12516	GO:0022804	active transmembrane	0.01	25	3.7147102	787	2.2727928
25379	GO:0051082	unfolded protein bindin	0.01	6	0.89153045	98	0.28301615
12574	GO:0022892	substrate-specific tran	0.01	41	6.092125	1463	4.2250266
4878	GO:0006772	thiamine metabolic pro	0.02	2	0.2971768	10	0.0288792
6592	GO:0009228	thiamine biosynthetic	0.02	2	0.2971768	10	0.0288792
8651	GO:0015248	sterol transporter activ	0.02	2	0.2971768	10	0.0288792
9178	GO:0015918	sterol transport	0.02	2	0.2971768	10	0.0288792
10072	GO:0017127	cholesterol transporter	0.02	2	0.2971768	10	0.0288792
12859	GO:0030301	cholesterol transport	0.02	2	0.2971768	10	0.0288792
30069	GO:0071705	nitrogen compound tra	0.02	9	1.3372957	202	0.5833598
3380	GO:0004766	spermidine synthase a	0.02	2	0.2971768	11	0.03176712
12573	GO:0022891	substrate-specific tran	0.02	35	5.2005944	1241	3.5839086
4261	GO:0006023	aminoglycan biosynthe	0.02	1	0.1485884	1	0.00288792
4262	GO:0006024	glycosaminoglycan bid	0.02	1	0.1485884	1	0.00288792
6615	GO:0009252 GO:0005	peptidoglycan biosynt	0.02	1	0.1485884	1	0.00288792
7606	GO:0010382	cellular cell wall macr	0.02	1	0.1485884	1	0.00288792
12766	GO:0030203	glycosaminoglycan me	0.02	1	0.1485884	1	0.00288792
20289	GO:0044038	cell wall macromolecul	0.02	1	0.1485884	1	0.00288792
28953	GO:0070589	cellular component ma	0.02	1	0.1485884	1	0.00288792
205	GO:0000270 GO:0005	peptidoglycan metabo	0.02	1	0.1485884	1	0.00288792
3827	GO:0005372	water transmembrane	0.02	5	0.74294204	81	0.23392151
4927	GO:0006833	water transport	0.02	5	0.74294204	81	0.23392151
8652	GO:0015250	water channel activity	0.02	5	0.74294204	81	0.23392151
18429	GO:0042044	fluid transport	0.02	5	0.74294204	81	0.23392151
6826	GO:0009538	photosystem I reactor	0.02	2	0.2971768	12	0.03465504
19047	GO:0042723	thiamine-containing co	0.02	2	0.2971768	12	0.03465504
19048	GO:0042724	thiamine-containing co	0.02	2	0.2971768	12	0.03465504
4894	GO:0006790	sulfur compound meta	0.02	4	0.5943536	55	0.15883559
6515	GO:0009150	purine ribonucleotide r	0.02	24	3.5661218	791	2.2843447
9933	GO:0016903	oxidoreductase activit	0.02	6	0.89153045	113	0.32633495
4493	GO:0006298 GO:0006	mismatch repair	0.03	3	0.44576523	33	0.09530135
24966	GO:0050660	flavin adenine dinucle	0.03	6	0.89153045	118	0.34077454
4373	GO:0006163	purine nucleotide meta	0.03	24	3.5661218	810	2.339215
18000	GO:0035639	purine ribonucleoside	0.03	23	3.4175334	769	2.2208104
6622	GO:0009259 GO:0005	ribonucleotide metabo	0.03	24	3.5661218	812	2.344991
12533	GO:0022838	substrate-specific cha	0.03	9	1.3372957	221	0.63823026
9719	GO:0016638	oxidoreductase activit	0.03	5	0.74294204	89	0.25702485
4405	GO:0006195	purine nucleotide cata	0.03	23	3.4175334	773	2.232362
6508	GO:0009143	nucleoside triphospha	0.03	23	3.4175334	773	2.232362
6509	GO:0009144	purine nucleoside triph	0.03	23	3.4175334	773	2.232362
6511	GO:0009146	purine nucleoside triph	0.03	23	3.4175334	773	2.232362
6519	GO:0009154	purine ribonucleotide	0.03	23	3.4175334	773	2.232362



6530	GO:0009166	nucleotide catabolic p	0.03	23	3.4175334	773	2.232362
6567	GO:0009203	ribonucleoside triphos	0.03	23	3.4175334	773	2.232362
6569	GO:0009205	purine ribonucleoside	0.03	23	3.4175334	773	2.232362
6571	GO:0009207	purine ribonucleoside	0.03	23	3.4175334	773	2.232362
6624	GO:0009261	ribonucleotide catabol	0.03	23	3.4175334	773	2.232362
17034	GO:0034655	nucleobase, nucleosid	0.03	23	3.4175334	773	2.232362
17035	GO:0034656	nucleobase, nucleosid	0.03	23	3.4175334	773	2.232362
22209	GO:0046700	heterocycle catabolic	0.03	23	3.4175334	773	2.232362
30879	GO:0072523	purine-containing com	0.03	23	3.4175334	773	2.232362
20520	GO:0044270	cellular nitrogen comp	0.03	23	3.4175334	777	2.2439137
8660	GO:0015267 GO:0015	channel activity	0.03	9	1.3372957	226	0.6526699
12515	GO:0022803	passive transmembra	0.03	9	1.3372957	226	0.6526699
6810	GO:0009522	photosystem I	0.03	2	0.2971768	15	0.043318797
12650	GO:0030060	L-malate dehydrogena	0.03	2	0.2971768	15	0.043318797
24968	GO:0050662	coenzyme binding	0.03	8	1.1887072	191	0.5515927
30877	GO:0072521	purine-containing com	0.03	24	3.5661218	827	2.3883097
6563	GO:0009199	ribonucleoside triphos	0.04	23	3.4175334	790	2.2814567
3334	GO:0004713 GO:0004	protein tyrosine kinase	0.04	2	0.2971768	16	0.046206716
206	GO:0000271	polysaccharide biosyn	0.04	2	0.2971768	16	0.046206716
2878	GO:0004072	aspartate kinase activ	0.04	1	0.1485884	2	0.00577584
3013	GO:0004328 GO:0034	formamidase activity	0.04	1	0.1485884	2	0.00577584
3069	GO:0004392	heme oxygenase (dec	0.04	1	0.1485884	2	0.00577584
3335	GO:0004714	transmembrane recep	0.04	1	0.1485884	2	0.00577584
3337	GO:0004716	receptor signaling prof	0.04	1	0.1485884	2	0.00577584
3434	GO:0004825	methionine-tRNA ligas	0.04	1	0.1485884	2	0.00577584
3595	GO:0005017	platelet-derived growth	0.04	1	0.1485884	2	0.00577584
3664	GO:0005128	erythropoietin receptor	0.04	1	0.1485884	2	0.00577584
3709	GO:0005176	ErbB-2 class receptor	0.04	1	0.1485884	2	0.00577584
3751	GO:0005251	delayed rectifier potas	0.04	1	0.1485884	2	0.00577584
3899	GO:0005547	phosphatidylinositol-3	0.04	1	0.1485884	2	0.00577584
4907	GO:0006808	regulation of nitrogen	0.04	1	0.1485884	2	0.00577584
5907	GO:0008413	8-oxo-7,8-dihydroguar	0.04	1	0.1485884	2	0.00577584
5923	GO:0008430	selenium binding	0.04	1	0.1485884	2	0.00577584
6023	GO:0008569	minus-end-directed m	0.04	1	0.1485884	2	0.00577584
7532	GO:0010307	acetylglutamate kinas	0.04	1	0.1485884	2	0.00577584
8513	GO:0015098	molybdate ion transme	0.04	1	0.1485884	2	0.00577584
8958	GO:0015689	molybdate ion transpo	0.04	1	0.1485884	2	0.00577584
9380	GO:0016151	nickel ion binding	0.04	1	0.1485884	2	0.00577584
11186	GO:0019177	dihydroneopterin triph	0.04	1	0.1485884	2	0.00577584
23486	GO:0048008	platelet-derived growth	0.04	1	0.1485884	2	0.00577584
24640	GO:0050321	tau-protein kinase acti	0.04	1	0.1485884	2	0.00577584
24919	GO:0050613 GO:0006	delta14-sterol reducta	0.04	1	0.1485884	2	0.00577584
24987	GO:0050681	androgen receptor bin	0.04	1	0.1485884	2	0.00577584
190	GO:0000247	C-8 sterol isomerase a	0.04	1	0.1485884	2	0.00577584
10058	GO:0017111	nucleoside-triphospha	0.04	25	3.7147102	878	2.5355935
14959	GO:0032553	ribonucleotide binding	0.04	23	3.4175334	795	2.2958963
14961	GO:0032555	purine ribonucleotide	0.04	23	3.4175334	795	2.2958963
3473	GO:0004867	serine-type endopeptid	0.04	4	0.5943536	66	0.1906027
6888	GO:0009611 GO:0002	response to wounding	0.04	4	0.5943536	66	0.1906027
6506	GO:0009141	nucleoside triphospha	0.04	23	3.4175334	796	2.2987843
10033	GO:0017076	purine nucleotide bind	0.04	23	3.4175334	797	2.3016722
9923	GO:0016892	endoribonuclease acti	0.04	2	0.2971768	17	0.049094636
9925	GO:0016894	endonuclease activity	0.04	2	0.2971768	17	0.049094636
9930	GO:0016899	oxidoreductase activit	0.04	2	0.2971768	17	0.049094636
16281	GO:0033897	ribonuclease T2 activi	0.04	2	0.2971768	17	0.049094636
11828	GO:0019899	enzyme binding	0.04	9	1.3372957	237	0.684437
22409	GO:0046906	tetrapyrrole binding	0.05	18	2.6745913	596	1.7212002
4408	GO:0006200	ATP catabolic process	0.05	19	2.8231797	641	1.8511566
9918	GO:0016887 GO:0004	ATPase activity	0.05	19	2.8231797	641	1.8511566
21600	GO:0046034	ATP metabolic proces	0.05	19	2.8231797	641	1.8511566
20532	GO:0044282	small molecule catabo	0.05	24	3.5661218	854	2.4662836
5874	GO:0008374	O-acyltransferase acti	0.05	5	0.74294204	102	0.29456782
3744	GO:0005244	voltage-gated ion chan	0.05	4	0.5943536	72	0.20793022
12528	GO:0022832	voltage-gated channel	0.05	4	0.5943536	72	0.20793022
15280	GO:0032879	regulation of localizat	0.05	4	0.5943536	72	0.20793022
17141	GO:0034762	regulation of transmem	0.05	4	0.5943536	72	0.20793022
17144	GO:0034765	regulation of ion trans	0.05	4	0.5943536	72	0.20793022
19568	GO:0043269	regulation of ion trans	0.05	4	0.5943536	72	0.20793022
25348	GO:0051049	regulation of transport	0.05	4	0.5943536	72	0.20793022
2895	GO:0004089	carbonate dehydratas	0.05	2	0.2971768	19	0.054870475
20522	GO:0044272	sulfur compound biosy	0.05	3	0.44576523	44	0.12706847
19253	GO:0042936	dipeptide transporter a	0.05	5	0.74294204	105	0.3032316
19255	GO:0042938	dipeptide transport	0.05	5	0.74294204	105	0.3032316
9579	GO:0016462	pyrophosphatase activ	0.05	26	3.8632987	954	2.7550755
9859	GO:0016818	hydrolase activity, acti	0.06	26	3.8632987	956	2.7608514
9768	GO:0016706	oxidoreductase activit	0.06	7	1.0401188	175	0.505386
30066	GO:0071702	organic substance traf	0.06	16	2.3774145	529	1.5277096
4867	GO:0006753	nucleoside phosphate	0.06	25	3.7147102	914	2.6395588
6484	GO:0009117	nucleotide metabolic p	0.06	25	3.7147102	914	2.6395588
31431	GO:0080054	low affinity nitrate tran	0.06	3	0.44576523	45	0.1299564
3747	GO:0005247	voltage-gated chloride	0.06	2	0.2971768	20	0.0577584
3754	GO:0005254	chloride channel activi	0.06	2	0.2971768	20	0.0577584
6201	GO:0008794	arsenate reductase (g	0.06	2	0.2971768	20	0.0577584
9707	GO:0016624	oxidoreductase activit	0.06	2	0.2971768	20	0.0577584
13086	GO:0030611	arsenate reductase ac	0.06	2	0.2971768	20	0.0577584
13088	GO:0030613	oxidoreductase activit	0.06	2	0.2971768	20	0.0577584
13089	GO:0030614	oxidoreductase activit	0.06	2	0.2971768	20	0.0577584
6636	GO:0009273	peptidoglycan-based c	0.06	1	0.1485884	3	0.00866376
18884	GO:0042546	cell wall biogenesis	0.06	1	0.1485884	3	0.00866376
9858	GO:0016817	hydrolase activity, acti	0.06	26	3.8632987	959	2.769515
28364	GO:0065007	biological regulation	0.06	99	14.710253	4376	12.637537



9396	GO:0016168	chlorophyll binding	0.06	3	0.44576523	46	0.13284431
3129	GO:0004467	long-chain fatty acid-C	0.06	2	0.2971768	21	0.060646318
9698	GO:0016615	malate dehydrogenase	0.06	2	0.2971768	21	0.060646318
2986	GO:0004252	serine-type endopeptid	0.06	6	0.89153045	144	0.41586044
7074	GO:0009815	1-aminocyclopropane-	0.07	3	0.44576523	49	0.14150807
25094	GO:0050789 GO:0050	regulation of biological	0.07	97	14.413075	4315	12.461374
4755	GO:0006629	lipid metabolic process	0.07	17	2.526003	590	1.7038727
4478	GO:0006281	DNA repair	0.07	6	0.89153045	149	0.43030006
5037	GO:0006974 GO:0034	response to DNA dam	0.07	6	0.89153045	149	0.43030006
4918	GO:0006821	chloride transport	0.07	2	0.2971768	23	0.060642216
4216	GO:0005976	polysaccharide metab	0.07	3	0.44576523	50	0.14439599
7166	GO:0009914	hormone transport	0.07	3	0.44576523	50	0.14439599
27891	GO:0060918	auxin transport	0.07	3	0.44576523	50	0.14439599
31536	GO:0080161	auxin transmembrane	0.07	3	0.44576523	50	0.14439599
26932	GO:0055086	nucleobase, nucleosid	0.08	25	3.7147102	944	2.7261963
2789	GO:0003968	RNA-directed RNA pc	0.08	1	0.1485884	4	0.011551679
3057	GO:0004373	glycogen (starch) synt	0.08	1	0.1485884	4	0.011551679
3084	GO:0004412	homoserine dehydrog	0.08	1	0.1485884	4	0.011551679
3336	GO:0004715	non-membrane spann	0.08	1	0.1485884	4	0.011551679
3557	GO:0004970	ionotropic glutamate r	0.08	1	0.1485884	4	0.011551679
4039	GO:0005751 GO:0005	mitochondrial respirat	0.08	1	0.1485884	4	0.011551679
5641	GO:0008066	glutamate receptor ac	0.08	1	0.1485884	4	0.011551679
5942	GO:0008456	alpha-N-acetylglactos	0.08	1	0.1485884	4	0.011551679
7170	GO:0009918	sterol delta7 reductase	0.08	1	0.1485884	4	0.011551679
7538	GO:0010313	phytochrome binding	0.08	1	0.1485884	4	0.011551679
8594	GO:0015184	L-cystine transmembr	0.08	1	0.1485884	4	0.011551679
8598	GO:0015188	L-isoleucine transmem	0.08	1	0.1485884	4	0.011551679
9072	GO:0015803	branched-chain alpha	0.08	1	0.1485884	4	0.011551679
9080	GO:0015811	L-cystine transport	0.08	1	0.1485884	4	0.011551679
9086	GO:0015818	isoleucine transport	0.08	1	0.1485884	4	0.011551679
9745	GO:0016672	oxidoreductase activit	0.08	1	0.1485884	4	0.011551679
10089	GO:0017151	DEAD/H-box RNA hel	0.08	1	0.1485884	4	0.011551679
15186	GO:0032784	regulation of transcript	0.08	1	0.1485884	4	0.011551679
15188	GO:0032786	positive regulation of t	0.08	1	0.1485884	4	0.011551679
15369	GO:0032968 GO:0090	positive regulation of t	0.08	1	0.1485884	4	0.011551679
16626	GO:0034243 GO:0090	regulation of transcript	0.08	1	0.1485884	4	0.011551679
17623	GO:0035257	nuclear hormone rece	0.08	1	0.1485884	4	0.011551679
17624	GO:0035258	steroid hormone recep	0.08	1	0.1485884	4	0.011551679
20810	GO:0045174	glutathione dehydroge	0.08	1	0.1485884	4	0.011551679
20901	GO:0045277 GO:0045	respiratory chain com	0.08	1	0.1485884	4	0.011551679
23084	GO:0047598	7-dehydrocholesterol	0.08	1	0.1485884	4	0.011551679
25055	GO:0050750	low-density lipoprotein	0.08	1	0.1485884	4	0.011551679
25711	GO:0051427	hormone receptor bind	0.08	1	0.1485884	4	0.011551679
28689	GO:0070325	lipoprotein particle rec	0.08	1	0.1485884	4	0.011551679
31507	GO:0080132	fatty acid alpha-hydrox	0.08	1	0.1485884	4	0.011551679
75	GO:0000099	sulfur amino acid trans	0.08	1	0.1485884	4	0.011551679
77	GO:0000101	sulfur amino acid trans	0.08	1	0.1485884	4	0.011551679
4311	GO:0006073	cellular glucan metabo	0.08	2	0.2971768	24	0.06931008
4692	GO:0006563	L-serine metabolic pro	0.08	2	0.2971768	24	0.06931008
20293	GO:0044042	glucan metabolic proc	0.08	2	0.2971768	24	0.06931008
2809	GO:0003993	acid phosphatase acti	0.08	3	0.44576523	52	0.15017183
6424	GO:0009055 GO:0009	electron carrier activit	0.08	6	0.89153045	154	0.44473964
5705	GO:0008152	metabolic process	0.08	357	53.046062	17432	50.34222
21145	GO:0045543	gibberellin 2-beta-diox	0.08	2	0.2971768	25	0.072197996
22007	GO:0046483	heterocycle metabolic	0.09	28	4.1604753	1094	3.1593843
25626	GO:0051336	regulation of hydrolase	0.09	7	1.0401188	196	0.5660323
11224	GO:0019222	regulation of metabolic	0.09	71	10.549777	3115	8.995871
28365	GO:0065008	regulation of biological	0.09	10	1.4858841	316	0.9125827
2962	GO:0004160	dihydroxy-acid dehydr	0.09	1	0.1485884	5	0.0144396
3392	GO:0004779	sulfate adenylyltransfe	0.09	1	0.1485884	5	0.0144396
3394	GO:0004781	sulfate adenylyltransfe	0.09	1	0.1485884	5	0.0144396
5243	GO:0007218	neuropeptide signaling	0.09	1	0.1485884	5	0.0144396
14047	GO:0031625	ubiquitin protein ligase	0.09	1	0.1485884	5	0.0144396
24603	GO:0050284	sinapate 1-glucosyltra	0.09	1	0.1485884	5	0.0144396
4909	GO:0006810 GO:0015	transport	0.09	54	8.023774	2315	6.6855345
25529	GO:0051234	establishment of local	0.09	54	8.023774	2315	6.6855345
21331	GO:0045735	nutrient reservoir activ	0.10	4	0.5943536	89	0.25702485
8919	GO:0015645	fatty acid ligase activit	0.10	2	0.2971768	27	0.077973835
12794	GO:0030234	enzyme regulator activ	0.10	12	1.7830609	403	1.1638317
25476	GO:0051179	localization	0.10	54	8.023774	2319	6.697086
8673	GO:0015291 GO:0015	secondary active trans	0.10	12	1.7830609	407	1.1753833
6438	GO:0009069	serine family amino ac	0.10	2	0.2971768	28	0.080861755
6809	GO:0009521 GO:0030	photosystem	0.10	2	0.2971768	28	0.080861755
6940	GO:0009672	auxin:hydrogen sympla	0.10	2	0.2971768	28	0.080861755
8028	GO:0010817	regulation of hormone	0.10	3	0.44576523	58	0.16749935
9422	GO:0016209	antioxidant activity	0.10	6	0.89153045	165	0.47650677
20498	GO:0044248	cellular catabolic proc	0.11	23	3.4175334	894	2.5818002
2694	GO:0003844	1,4-alpha-glucan bran	0.11	1	0.1485884	6	0.01732752
2713	GO:0003863	3-methyl-2-oxobutano	0.11	1	0.1485884	6	0.01732752
3029	GO:0004345	glucose-6-phosphate t	0.11	1	0.1485884	6	0.01732752
3058	GO:0004375	glycine dehydrogenase	0.11	1	0.1485884	6	0.01732752
3065	GO:0004382	guanosine-diphosphat	0.11	1	0.1485884	6	0.01732752
3777	GO:0005302 GO:0015	L-tyrosine transmembr	0.11	1	0.1485884	6	0.01732752
3845	GO:0005452	inorganic anion excha	0.11	1	0.1485884	6	0.01732752
4532	GO:0006357 GO:0006	regulation of transcript	0.11	1	0.1485884	6	0.01732752
4953	GO:0006868 GO:0015	glutamine transport	0.11	1	0.1485884	6	0.01732752
8586	GO:0015173	aromatic amino acid tr	0.11	1	0.1485884	6	0.01732752
8596	GO:0015186	L-glutamine transmem	0.11	1	0.1485884	6	0.01732752
9070	GO:0015801	aromatic amino acid tr	0.11	1	0.1485884	6	0.01732752
9096	GO:0015828	tyrosine transport	0.11	1	0.1485884	6	0.01732752
9723	GO:0016642	oxidoreductase activit	0.11	1	0.1485884	6	0.01732752
9825	GO:0016774	phosphotransferase a	0.11	1	0.1485884	6	0.01732752
11169	GO:0019156	isoamylase activity	0.11	1	0.1485884	6	0.01732752
13832	GO:0031409	pigment binding	0.11	1	0.1485884	6	0.01732752
22095	GO:0046577	long-chain-alcohol oxi	0.11	1	0.1485884	6	0.01732752



23230	GO:0047746	chlorophyllase activity	0.11	1	0.1485884	6	0.01732752
30707	GO:0072348	sulfur compound trans	0.11	1	0.1485884	6	0.01732752
191	GO:0000248	C-5 sterol desaturase	0.11	1	0.1485884	6	0.01732752
9266	GO:0016020	membrane	0.11	83	12.332838	3741	10.803708
4215	GO:0005975	carbohydrate metabol	0.11	25	3.7147102	990	2.8590407
3886	GO:0005527	macrolide binding	0.11	2	0.2971768	30	0.086637594
3887	GO:0005528	FK506 binding	0.11	2	0.2971768	30	0.086637594
8526	GO:0015112	nitrate transmembran	0.12	3	0.44576523	61	0.1761631
8975	GO:0015706 GO:0006	nitrate transport	0.12	3	0.44576523	61	0.1761631
21058	GO:0045454 GO:0036	cell redox homeostasi	0.12	7	1.0401188	211	0.6093511
11931	GO:0020037	heme binding	0.12	15	2.228826	550	1.5883559
20514	GO:0044264	cellular polysaccharid	0.12	2	0.2971768	31	0.08952551
15949	GO:0033554	cellular response to st	0.12	6	0.89153045	173	0.49961013
3242	GO:0004601 GO:0016	peroxidase activity	0.12	5	0.74294204	135	0.38986918
9754	GO:0016684	oxidoreductase activit	0.12	5	0.74294204	135	0.38986918
5766	GO:0008236	serine-type peptidase	0.13	7	1.0401188	214	0.6180149
3717	GO:0005199	structural constituent c	0.13	2	0.2971768	32	0.09241343
21041	GO:0045431	flavonol synthase activ	0.13	2	0.2971768	32	0.09241343
25836	GO:0051552	flavone metabolic prod	0.13	2	0.2971768	32	0.09241343
25837	GO:0051553	flavone biosynthetic p	0.13	2	0.2971768	32	0.09241343
25838	GO:0051554	flavonol metabolic pro	0.13	2	0.2971768	32	0.09241343
25839	GO:0051555	flavonol biosynthetic p	0.13	2	0.2971768	32	0.09241343
9293	GO:0016051 GO:0006	carbohydrate biosynth	0.13	3	0.44576523	64	0.18482687
3357	GO:0004738	pyruvate dehydrogena	0.13	1	0.1485884	7	0.020215439
3358	GO:0004739	pyruvate dehydrogena	0.13	1	0.1485884	7	0.020215439
3367	GO:0004748 GO:0016	ribonucleoside-diphos	0.13	7	0.1485884	7	0.020215439
4260	GO:0006022	aminoglycan metabolit	0.13	1	0.1485884	7	0.020215439
9786	GO:0016725	oxidoreductase activit	0.13	1	0.1485884	7	0.020215439
9789	GO:0016728	oxidoreductase activit	0.13	1	0.1485884	7	0.020215439
21107	GO:0045505	dynein intermediate ch	0.13	1	0.1485884	7	0.020215439
2632	GO:0003682	chromatin binding	0.13	2	0.2971768	33	0.09530135
4942	GO:0006855	drug transmembrane t	0.14	5	0.74294204	139	0.40142086
8607	GO:0015197 GO:0015	peptide transporter ac	0.14	5	0.74294204	139	0.40142086
8608	GO:0015198	oligopeptide transport	0.14	5	0.74294204	139	0.40142086
8642	GO:0015238 GO:0015	drug transmembrane t	0.14	5	0.74294204	139	0.40142086
9154	GO:0015893	drug transport	0.14	5	0.74294204	139	0.40142086
18832	GO:0042493 GO:0017	response to drug	0.14	5	0.74294204	139	0.40142086
25098	GO:0050794 GO:0051	regulation of cellular p	0.14	87	12.927192	3987	11.514136
3872	GO:0005506	iron ion binding	0.14	15	2.228826	563	1.6258988
10103	GO:0017171	serine hydrolase activ	0.14	7	1.0401188	220	0.63534236
4944	GO:0006857	oligopeptide transport	0.14	5	0.74294204	141	0.4071967
9099	GO:0015833	peptide transport	0.14	5	0.74294204	141	0.4071967
3749	GO:0005249	voltage-gated potassi	0.14	2	0.2971768	34	0.09818927
5700	GO:0008144	drug binding	0.14	2	0.2971768	34	0.09818927
5827	GO:0008308 GO:0022	voltage-gated anion ch	0.14	2	0.2971768	34	0.09818927
20321	GO:0044070	regulation of anion tra	0.14	2	0.2971768	34	0.09818927
2932	GO:0004130	cytochrome-c peroxid	0.15	1	0.1485884	8	0.023103358
2935	GO:0004133	glycogen debranching	0.15	1	0.1485884	8	0.023103358
3280	GO:0004645	phosphorylase activity	0.15	1	0.1485884	8	0.023103358
3356	GO:0004737	pyruvate decarboxylas	0.15	1	0.1485884	8	0.023103358
3803	GO:0005344 GO:0015	oxygen transporter ac	0.15	1	0.1485884	8	0.023103358
4035	GO:0005746	mitochondrial respirat	0.15	1	0.1485884	8	0.023103358
4486	GO:0006289 GO:0045	nucleotide-excision re	0.15	1	0.1485884	8	0.023103358
4664	GO:0006535	cysteine biosynthetic p	0.15	1	0.1485884	8	0.023103358
5724	GO:0008184	glycogen phosphoryla	0.15	1	0.1485884	8	0.023103358
6613	GO:0009250	glucan biosynthetic pr	0.15	1	0.1485884	8	0.023103358
8940	GO:0015669	gas transport	0.15	1	0.1485884	8	0.023103358
8942	GO:0015671	oxygen transport	0.15	1	0.1485884	8	0.023103358
10057	GO:0017110	nucleoside-diphospha	0.15	1	0.1485884	8	0.023103358
12818	GO:0030259	lipid glycosylation	0.15	1	0.1485884	8	0.023103358
22702	GO:0047209	coniferyl-alcohol gluc	0.15	1	0.1485884	8	0.023103358
28833	GO:0070469	respiratory chain	0.15	1	0.1485884	8	0.023103358
29068	GO:0070704	sterol desaturase activ	0.15	1	0.1485884	8	0.023103358
30696	GO:0072337	modified amino acid tr	0.15	1	0.1485884	8	0.023103358
30708	GO:0072349	modified amino acid tr	0.15	1	0.1485884	8	0.023103358
4530	GO:0006355 GO:0032	regulation of transcript	0.15	58	8.618128	2591	7.4826
25095	GO:0050790	regulation of catalytic	0.15	13	1.9316493	480	1.3862015
25544	GO:0051252	regulation of RNA met	0.15	58	8.618128	2593	7.488376
9722	GO:0016641	oxidoreductase activit	0.15	3	0.44576523	69	0.19926646
28366	GO:0065009	regulation of molecula	0.15	13	1.9316493	484	1.3977532
9185	GO:0015925	galactosidase activity	0.15	2	0.2971768	36	0.10396511
12626	GO:0030029	actin filament-based p	0.15	2	0.2971768	36	0.10396511
12633	GO:0030036	actin cytoskeleton org	0.15	2	0.2971768	36	0.10396511
7141	GO:0009889	regulation of biosynthe	0.16	58	8.618128	2605	7.523031
7772	GO:0010556	regulation of macromol	0.16	58	8.618128	2605	7.523031
13756	GO:0031326	regulation of cellular b	0.16	58	8.618128	2605	7.523031
32213	GO:2000112	regulation of cellular m	0.16	58	8.618128	2605	7.523031
3758	GO:0005267	potassium channel ac	0.16	2	0.2971768	37	0.10685303
2655	GO:0003725	double-stranded RNA	0.16	1	0.1485884	9	0.025991278
2837	GO:0004028	3-chloroallyl aldehyde	0.16	1	0.1485884	9	0.025991278
19342	GO:0043027	caspase inhibitor activ	0.16	1	0.1485884	9	0.025991278
19343	GO:0043028	caspase regulator acti	0.16	1	0.1485884	9	0.025991278
19458	GO:0043154 GO:0006	negative regulation of	0.16	1	0.1485884	9	0.025991278
19579	GO:0043281 GO:0043	regulation of caspase	0.16	1	0.1485884	9	0.025991278
21104	GO:0045502	dynein binding	0.16	1	0.1485884	9	0.025991278
79	GO:0000103 GO:0015	sulfate assimilation	0.16	1	0.1485884	9	0.025991278
9740	GO:0016667	oxidoreductase activit	0.16	3	0.44576523	72	0.20793022
18953	GO:0042623	ATPase activity, coup	0.17	14	2.0802376	537	1.550813
5066	GO:0007010	cytoskeleton organiz	0.17	2	0.2971768	38	0.10974095
8588	GO:0015175	neutral amino acid tra	0.17	2	0.2971768	38	0.10974095
9073	GO:0015804	neutral amino acid tra	0.17	2	0.2971768	38	0.10974095
12538	GO:0022843	voltage-gated cation c	0.17	2	0.2971768	38	0.10974095
9703	GO:0016620	oxidoreductase activit	0.17	3	0.44576523	73	0.21081814
11695	GO:0019725	cellular homeostasis	0.17	7	1.0401188	234	0.67577326
7692	GO:0010468	regulation of gene exp	0.18	58	8.618128	2635	7.6096687



2897	GO:0004091 GO:0004	carboxylesterase activ	0.18	6	0.89153045	194	0.5602564
3056	GO:0004372	glycine hydroxymethyl	0.18	1	0.1485884	10	0.0288792
3203	GO:0004557	alpha-galactosidase a	0.18	1	0.1485884	10	0.0288792
3362	GO:0004743	pyruvate kinase activi	0.18	1	0.1485884	10	0.0288792
4663	GO:0006534	cysteine metabolic pro	0.18	1	0.1485884	10	0.0288792
8470	GO:0015037	peptide disulfide oxid	0.18	1	0.1485884	10	0.0288792
8471	GO:0015038	glutathione disulfide o	0.18	1	0.1485884	10	0.0288792
9659	GO:0016572	histone phosphorylati	0.18	1	0.1485884	10	0.0288792
10220	GO:0018105	peptidyl-serine phosph	0.18	1	0.1485884	10	0.0288792
10320	GO:0018209	peptidyl-serine modifi	0.18	1	0.1485884	10	0.0288792
11205	GO:0019202	amino acid kinase acti	0.18	1	0.1485884	10	0.0288792
11337	GO:0019344	cysteine biosynthetic r	0.18	1	0.1485884	10	0.0288792
13472	GO:0031013	troponin I binding	0.18	1	0.1485884	10	0.0288792
17539	GO:0035173	histone kinase activity	0.18	1	0.1485884	10	0.0288792
17540	GO:0035174	histone serine kinase	0.18	1	0.1485884	10	0.0288792
17541	GO:0035175 GO:0044	histone kinase activity	0.18	1	0.1485884	10	0.0288792
17770	GO:0035404	histone-serine phosph	0.18	1	0.1485884	10	0.0288792
20239	GO:0043987 GO:0043	histone H3-S10 phosph	0.18	1	0.1485884	10	0.0288792
23419	GO:0047938	glucose-6-phosphate	0.18	1	0.1485884	10	0.0288792
26022	GO:0051740	ethylene binding	0.18	1	0.1485884	10	0.0288792
28451	GO:0070085	glycosylation	0.18	1	0.1485884	10	0.0288792
30687	GO:0072328	alkene binding	0.18	1	0.1485884	10	0.0288792
3627	GO:0005085 GO:0008	quanyl-nucleotide exc	0.18	3	0.44576523	75	0.21659398
9801	GO:0016747	transferase activity, tra	0.18	12	1.7830609	456	1.3168914
7072	GO:0009813	flavonoid biosynthetic	0.18	2	0.2971768	40	0.1155168
18925	GO:0042592	homeostatic process	0.18	7	1.0401188	238	0.68732494
5663	GO:0008094 GO:0004	DNA-dependent ATPa	0.18	3	0.44576523	76	0.2194819
8494	GO:0015075	ion transmembrane tra	0.19	20	2.9717681	827	2.3883097
23515	GO:0048037	cofactor binding	0.19	9	1.3372957	327	0.94434977
9767	GO:0016705	oxidoreductase activit	0.19	9	1.3372957	329	0.95012563
5196	GO:0007166	cell surface receptor li	0.19	3	0.44576523	78	0.22525774
2791	GO:0003973	(S)-2-hydroxy-acid oxi	0.19	1	0.1485884	11	0.03176712
2989	GO:0004301	epoxide hydrolase acti	0.19	1	0.1485884	11	0.03176712
3202	GO:0004556	alpha-amylase activity	0.19	1	0.1485884	11	0.03176712
6288	GO:0008891	glycolate oxidase activ	0.19	1	0.1485884	11	0.03176712
9849	GO:0016803	ether hydrolase activit	0.19	1	0.1485884	11	0.03176712
11152	GO:0019139 GO:0043	cytokinin dehydrogena	0.19	1	0.1485884	11	0.03176712
3753	GO:0005253	anion channel activity	0.20	2	0.2971768	42	0.121292636
4874	GO:0006767	water-soluble vitamin	0.20	2	0.2971768	42	0.121292636
8461	GO:0015020 GO:0003	glucuronosyltransferas	0.20	2	0.2971768	42	0.121292636
18713	GO:0042364	water-soluble vitamin	0.20	2	0.2971768	42	0.121292636
27228	GO:0060255	regulation of macromol	0.20	58	8.618128	2660	7.6818666
16603	GO:0034220	ion transmembrane tra	0.20	20	2.9717681	833	2.4056373
131	GO:0000166	nucleotide binding	0.20	28	4.1604753	1213	3.5030468
8589	GO:0015179	L-amino acid transme	0.20	2	0.2971768	43	0.124180555
9076	GO:0015807	L-amino acid transpor	0.20	2	0.2971768	43	0.124180555
9875	GO:0016836	hydro-lyase activity	0.20	3	0.44576523	80	0.2310336
11221	GO:0019219	regulation of nucleoba	0.21	58	8.618128	2675	7.7251854
25468	GO:0051171	regulation of nitrogen	0.21	58	8.618128	2675	7.7251854
2838	GO:0004029	aldehyde dehydrogena	0.21	1	0.1485884	12	0.03465504
3037	GO:0004353	glutamate dehydrogen	0.21	1	0.1485884	12	0.03465504
3049	GO:0004365	glyceraldehyde-3-phos	0.21	1	0.1485884	12	0.03465504
3246	GO:0004605	phosphatidate cytidily	0.21	1	0.1485884	12	0.03465504
4217	GO:0005977	glycogen metabolic pr	0.21	1	0.1485884	12	0.03465504
4344	GO:0006112	energy reserve metab	0.21	1	0.1485884	12	0.03465504
6336	GO:0008943	glyceraldehyde-3-phos	0.21	1	0.1485884	12	0.03465504
6439	GO:0009070	serine family amino ac	0.21	1	0.1485884	12	0.03465504
21503	GO:0045935	positive regulation of r	0.21	1	0.1485884	12	0.03465504
25470	GO:0051173	positive regulation of r	0.21	1	0.1485884	12	0.03465504
25546	GO:0051254	positive regulation of R	0.21	1	0.1485884	12	0.03465504
37	GO:0000049	tRNA binding	0.21	1	0.1485884	12	0.03465504
4873	GO:0006766	vitamin metabolic pro	0.21	2	0.2971768	44	0.12706847
6477	GO:0009110	vitamin biosynthetic pr	0.21	2	0.2971768	44	0.12706847
7071	GO:0009812	flavonoid metabolic pr	0.21	2	0.2971768	44	0.12706847
12532	GO:0022836	gated channel activit	0.21	4	0.5943536	122	0.3523262
3630	GO:0005088	Ras guanyl-nucleotide	0.22	2	0.2971768	45	0.1299564
3787	GO:0005319	lipid transporter activit	0.22	3	0.44576523	83	0.23969735
4912	GO:0006813 GO:0015	potassium ion transpo	0.22	3	0.44576523	84	0.24258527
30168	GO:0071804	cellular potassium ion	0.22	3	0.44576523	84	0.24258527
30169	GO:0071805	potassium ion transme	0.22	3	0.44576523	84	0.24258527
4357	GO:0006139 GO:0055	nucleobase, nucleosid	0.22	70	10.401189	3285	9.486816
2896	GO:0004090	carbonyl reductase (N	0.23	1	0.1485884	13	0.037542958
7551	GO:0010327	acetyl CoA:(Z)-3-hex	0.23	1	0.1485884	13	0.037542958
8149	GO:0010941	regulation of cell death	0.23	1	0.1485884	13	0.037542958
13443	GO:0030984	kininogen binding	0.23	1	0.1485884	13	0.037542958
19298	GO:0042981	regulation of apoptosis	0.23	1	0.1485884	13	0.037542958
19381	GO:0043067 GO:0043	regulation of program	0.23	1	0.1485884	13	0.037542958
6425	GO:0009056	catabolic process	0.24	24	3.5661218	1051	3.0352037
31465	GO:0080090	regulation of primary r	0.24	58	8.618128	2710	7.826263
2976	GO:0004176 GO:0004	ATP-dependent peptid	0.24	2	0.2971768	48	0.13862015
2977	GO:0004177	aminopeptidase activi	0.24	1	0.1485884	14	0.040430877
3204	GO:0004558 GO:0004	alpha-glucosidase act	0.24	1	0.1485884	14	0.040430877
3629	GO:0005087	Ran guanyl-nucleotide	0.24	1	0.1485884	14	0.040430877
5197	GO:0007167	enzyme linked recepto	0.24	1	0.1485884	14	0.040430877
5199	GO:0007169	transmembrane recep	0.24	1	0.1485884	14	0.040430877
7413	GO:0010181	FMN binding	0.24	1	0.1485884	14	0.040430877
9720	GO:0016639	oxidoreductase activit	0.24	1	0.1485884	14	0.040430877
9847	GO:0016801	hydrolase activity, acti	0.24	1	0.1485884	14	0.040430877
28373	GO:0070006	metalloaminopeptidas	0.24	1	0.1485884	14	0.040430877
3756	GO:0005261 GO:0015	cation channel activit	0.25	2	0.2971768	49	0.14150807
9725	GO:0016645	oxidoreductase activit	0.25	2	0.2971768	49	0.14150807
4605	GO:0006457 GO:0007	protein folding	0.25	5	0.74294204	173	0.49961013
8675	GO:0015293	symporter activity	0.25	5	0.74294204	173	0.49961013
13753	GO:0031323	regulation of cellular m	0.25	59	8.766716	2770	7.999538
8635	GO:0015229	L-ascorbic acid transp	0.26	1	0.1485884	15	0.043318797



9144	GO:0015882	L-ascorbic acid transp	0.26	1	0.1485884	15	0.043318797
16081	GO:0033692	cellular polysaccharide	0.26	1	0.1485884	15	0.043318797
2758	GO:0003924	GTPase activity	0.26	4	0.5943536	132	0.3812054
4394	GO:0006184	GTP catabolic proces	0.26	4	0.5943536	132	0.3812054
21605	GO:0046039	GTP metabolic proces	0.26	4	0.5943536	132	0.3812054
4906	GO:0006807	nitrogen compound m	0.26	78	11.589896	3725	10.757502
19126	GO:0042803	protein homodimerizat	0.26	7	1.0401188	265	0.7652988
30207	GO:0071843	cellular component bic	0.26	2	0.2971768	51	0.14728391
9800	GO:0016746	transferase activity, tra	0.26	12	1.7830609	498	1.438184
6965	GO:0009699	phenylpropanoid biosy	0.27	2	0.2971768	52	0.15017183
2667	GO:0003777	microtubule motor acti	0.27	1	0.1485884	16	0.046206716
3742	GO:0005242	inward rectifier potass	0.27	1	0.1485884	16	0.046206716
7178	GO:0009927	histidine phosphotrans	0.27	1	0.1485884	16	0.046206716
9189	GO:0015929	hexosaminidase activi	0.27	1	0.1485884	16	0.046206716
9727	GO:0016647	oxidoreductase activit	0.27	1	0.1485884	16	0.046206716
9797	GO:0016742	hydroxymethyl-, formy	0.27	1	0.1485884	16	0.046206716
9898	GO:0016863	intramolecular oxidore	0.27	1	0.1485884	16	0.046206716
13435	GO:0030976	thiamine pyrophospha	0.27	1	0.1485884	16	0.046206716
18757	GO:0042409	caffeoyl-CoA O-methyl	0.27	1	0.1485884	16	0.046206716
22110	GO:0046592	polyamine oxidase act	0.27	1	0.1485884	16	0.046206716
72	GO:0000096	sulfur amino acid meta	0.27	1	0.1485884	16	0.046206716
73	GO:0000097	sulfur amino acid bios	0.27	1	0.1485884	16	0.046206716
219	GO:0000287	magnesium ion bindin	0.27	1	0.1485884	16	0.046206716
2643	GO:0003700 GO:000	sequence-specific DN	0.27	31	4.6062407	1417	4.0921826
716	GO:0001071	nucleic acid binding tra	0.27	31	4.6062407	1417	4.0921826
8585	GO:0015172	acidic amino acid tran	0.28	1	0.1485884	17	0.049094636
9069	GO:0015800	acidic amino acid tran	0.28	1	0.1485884	17	0.049094636
2674	GO:0003824	catalytic activity	0.29	216	32.095097	10750	31.045137
3724	GO:0005216	ion channel activity	0.29	4	0.5943536	140	0.40430877
8676	GO:0015294	solute:cation symport	0.29	4	0.5943536	141	0.4071967
5767	GO:0008237	metallopeptidase activ	0.30	2	0.2971768	56	0.16172351
5765	GO:0008235	metalloexopeptidase a	0.30	1	0.1485884	18	0.051982556
6491	GO:0009126	purine nucleoside mor	0.30	1	0.1485884	18	0.051982556
6492	GO:0009127	purine nucleoside mor	0.30	1	0.1485884	18	0.051982556
6517	GO:0009152	purine ribonucleotide t	0.30	1	0.1485884	18	0.051982556
6531	GO:0009167	purine ribonucleoside	0.30	1	0.1485884	18	0.051982556
6532	GO:0009168	purine ribonucleoside	0.30	1	0.1485884	18	0.051982556
8469	GO:0015036	disulfide oxidoreducta	0.30	1	0.1485884	18	0.051982556
8662	GO:0015271	outward rectifier potas	0.30	1	0.1485884	18	0.051982556
22917	GO:0047429	nucleoside-triphospha	0.30	1	0.1485884	18	0.051982556
28931	GO:0070567	cytidyltransferase ac	0.30	1	0.1485884	18	0.051982556
17020	GO:0034641	cellular nitrogen comp	0.30	76	11.292719	3678	10.621769
5763	GO:0008233	peptidase activity	0.31	13	1.9316493	565	1.6316746
20531	GO:0044281	small molecule metab	0.31	38	5.6463594	1788	5.1636004
3290	GO:0004656	procollagen-proline 4-	0.31	1	0.1485884	19	0.054870475
11752	GO:0019798	procollagen-proline dic	0.31	1	0.1485884	19	0.054870475
13966	GO:0031543	peptidyl-proline dioxyc	0.31	1	0.1485884	19	0.054870475
13968	GO:0031545	peptidyl-proline 4-diox	0.31	1	0.1485884	19	0.054870475
4910	GO:0006811	ion transport	0.32	21	3.1203566	959	2.769515
2626	GO:0003674 GO:000	molecular_function	0.32	480	71.32243	24394	70.447914
2675	GO:0003825	alpha.alpha-trehalose-	0.32	1	0.1485884	20	0.0577584
3628	GO:0005086	ARF guanyl-nucleotid	0.32	1	0.1485884	20	0.0577584
9706	GO:0016623	oxidoreductase activit	0.32	1	0.1485884	20	0.0577584
9784	GO:0016723	oxidoreductase activit	0.32	1	0.1485884	20	0.0577584
24482	GO:0050162	oxalate oxidase activit	0.32	1	0.1485884	20	0.0577584
25477	GO:0051180	vitamin transport	0.32	1	0.1485884	20	0.0577584
25480	GO:0051183	vitamin transporter ac	0.32	1	0.1485884	20	0.0577584
122	GO:0000154 GO:001	rRNA modification	0.32	1	0.1485884	20	0.0577584
225	GO:0000293	ferric-chelate reductas	0.32	1	0.1485884	20	0.0577584
6964	GO:0009698	phenylpropanoid meta	0.33	2	0.2971768	60	0.17327519
8943	GO:0015672	monovalent inorganic	0.33	9	1.3372957	383	1.1060733
11426	GO:0019438	aromatic compound bind	0.33	4	0.5943536	149	0.43030006
2818	GO:0004003	ATP-dependent DNA	0.33	2	0.2971768	61	0.1761631
3474	GO:0004869 GO:000	cysteine-type endopept	0.34	1	0.1485884	21	0.060646318
3195	GO:0004540	ribonuclease activity	0.34	3	0.44576523	106	0.3061195
5213	GO:0007186	G-protein coupled rec	0.34	2	0.2971768	62	0.17905103
9697	GO:0016614	oxidoreductase activit	0.34	7	1.0401188	293	0.84616053
17016	GO:0034637	cellular carbohydrate t	0.35	2	0.2971768	63	0.18193895
6521	GO:0009156	ribonucleoside monop	0.35	1	0.1485884	22	0.06353424
6525	GO:0009161	ribonucleoside monop	0.35	1	0.1485884	22	0.06353424
7143	GO:0009891	positive regulation of t	0.35	1	0.1485884	22	0.06353424
8489	GO:0015066	alpha-amylase inhibit	0.35	1	0.1485884	22	0.06353424
8774	GO:0015431	glutathione S-conjugat	0.35	1	0.1485884	22	0.06353424
13031	GO:0030544	Hsp70 protein binding	0.35	1	0.1485884	22	0.06353424
13758	GO:0031328	positive regulation of c	0.35	1	0.1485884	22	0.06353424
24858	GO:0050551	myrcene synthase acti	0.35	1	0.1485884	22	0.06353424
30359	GO:0071997	glutathione S-conjugat	0.35	1	0.1485884	22	0.06353424
28378	GO:0070011	peptidase activity, acti	0.35	12	1.7830609	537	1.550813
9710	GO:0016628	oxidoreductase activit	0.36	2	0.2971768	65	0.18771479
2633	GO:0003684	damaged DNA binding	0.36	1	0.1485884	23	0.06642216
3662	GO:0005126	cytokine receptor bind	0.36	1	0.1485884	23	0.06642216
7527	GO:0010302	2-oxoglutarate-depend	0.36	1	0.1485884	23	0.06642216
3626	GO:0005083	small GTPase regulat	0.37	3	0.44576523	111	0.3205591
3180	GO:0004521	endoribonuclease acti	0.37	2	0.2971768	66	0.1906027
9765	GO:0016702	oxidoreductase activit	0.37	2	0.2971768	66	0.1906027
11829	GO:0019900	kinase binding	0.37	2	0.2971768	66	0.1906027
2629	GO:0003678 GO:000	DNA helicase activity	0.38	2	0.2971768	67	0.19349062
8559	GO:0015146	pentose transmembra	0.38	1	0.1485884	24	0.06931008
8561	GO:0015148	D-xylose transmembra	0.38	1	0.1485884	24	0.06931008
8829	GO:0015519	D-xylose:hydrogen sy	0.38	1	0.1485884	24	0.06931008
9019	GO:0015750	pentose transport	0.38	1	0.1485884	24	0.06931008
9022	GO:0015753	D-xylose transport	0.38	1	0.1485884	24	0.06931008
9779	GO:0016717	oxidoreductase activit	0.38	1	0.1485884	24	0.06931008
20488	GO:0044238	primary metabolic pro	0.38	182	27.04309	9167	26.47356
9836	GO:0016787	hydrolase activity	0.39	75	11.144131	3723	10.751725



3620	GO:0005057	receptor signaling prot	0.39	2	0.2971768	69	0.19926646
21710	GO:0046148	pigment biosynthetic p	0.39	2	0.2971768	69	0.19926646
2649	GO:0003713	transcription coactivat	0.40	2	0.2971768	70	0.20215438
5726	GO:0008187	poly-pyrimidine tract b	0.40	2	0.2971768	70	0.20215438
5788	GO:0008266	poly(U) RNA binding	0.40	2	0.2971768	70	0.20215438
3210	GO:0004565	beta-galactosidase ac	0.40	1	0.1485884	26	0.075085916
3415	GO:0004805	trehalose-phosphatas	0.40	1	0.1485884	26	0.075085916
7000	GO:0009734	auxin mediated signal	0.40	1	0.1485884	26	0.075085916
7540	GO:0010315	auxin efflux	0.40	1	0.1485884	26	0.075085916
7553	GO:0010329	auxin efflux transmeme	0.40	1	0.1485884	26	0.075085916
17147	GO:0034768	(E)-beta-ocimene synt	0.40	1	0.1485884	26	0.075085916
29729	GO:0071365	cellular response to al	0.40	1	0.1485884	26	0.075085916
126	GO:0000160	two-component signal	0.40	1	0.1485884	26	0.075085916
9764	GO:0016701	oxidoreductase activit	0.41	2	0.2971768	72	0.20793022
5018	GO:0006950	response to stress	0.41	13	1.9316493	611	1.764519
3631	GO:0005089	Rho guanyl-nucleotide	0.41	1	0.1485884	27	0.077973835
9389	GO:0016160	amylase activity	0.41	1	0.1485884	27	0.077973835
9541	GO:0016413	O-acetyltransferase ac	0.41	1	0.1485884	27	0.077973835
18786	GO:0042440	pigment metabolic pro	0.42	2	0.2971768	73	0.21081814
17617	GO:0035251	UDP-glucosyltransfera	0.42	5	0.74294204	218	0.62956655
3284	GO:0004650	polygalacturonase act	0.42	1	0.1485884	28	0.080861755
4374	GO:0006164	purine nucleotide bios	0.42	1	0.1485884	28	0.080861755
6079	GO:0008654	phospholipid biosynthe	0.42	1	0.1485884	28	0.080861755
7145	GO:0009893	positive regulation of r	0.42	1	0.1485884	28	0.080861755
7819	GO:0010604	positive regulation of r	0.42	1	0.1485884	28	0.080861755
8863	GO:0015562	efflux transmembrane	0.42	1	0.1485884	28	0.080861755
9238	GO:0015980	energy derivation by c	0.42	1	0.1485884	28	0.080861755
13144	GO:0030674	protein binding, bridgin	0.42	1	0.1485884	28	0.080861755
13755	GO:0031325	positive regulation of d	0.42	1	0.1485884	28	0.080861755
27064	GO:0060090	binding, bridging	0.42	1	0.1485884	28	0.080861755
139	GO:0000175	3'-5'-exoribonuclease	0.42	1	0.1485884	28	0.080861755
4526	GO:0006351 GO:0006	transcription, DNA-dep	0.42	32	4.754829	1575	4.548474
15176	GO:0032774	RNA biosynthetic proc	0.42	32	4.754829	1575	4.548474
6884	GO:0009607	response to biotic stim	0.42	3	0.44576523	122	0.3523262
25195	GO:0050896 GO:005	response to stimulus	0.43	38	5.6463594	1881	5.432177
22049	GO:0046527	glucosyltransferase ac	0.43	6	0.89153045	270	0.77973837
3260	GO:0004620	phospholipase activity	0.43	3	0.44576523	123	0.35521415
2975	GO:0004175 GO:0016	endopeptidase activity	0.43	7	1.0401188	320	0.9241344
25510	GO:0051213	dioxygenase activity	0.43	2	0.2971768	75	0.21659398
3490	GO:0004888 GO:0004	transmembrane recep	0.43	12	1.7830609	571	1.6490022
4968	GO:0006886	intracellular protein tra	0.43	1	0.1485884	29	0.083749674
16992	GO:0034613 GO:0016	cellular protein localiza	0.43	1	0.1485884	29	0.083749674
29091	GO:0070727	cellular macromolecul	0.43	1	0.1485884	29	0.083749674
5732	GO:0008194	UDP-glycosyltransfera	0.44	7	1.0401188	322	0.9299102
6529	GO:0009165	nucleotide biosynthetic	0.44	2	0.2971768	77	0.22236982
2666	GO:0003774	motor activity	0.45	1	0.1485884	30	0.086637594
3518	GO:0004930 GO:000	G-protein coupled rec	0.45	1	0.1485884	30	0.086637594
6216	GO:0008810	cellulase activity	0.45	1	0.1485884	30	0.086637594
6488	GO:0009123	nucleoside monophos	0.45	1	0.1485884	30	0.086637594
6489	GO:0009124	nucleoside monophos	0.45	1	0.1485884	30	0.086637594
8683	GO:0015301 GO:0015	anion:anion antiporter	0.45	1	0.1485884	30	0.086637594
5681	GO:0008116	prostaglandin-I syntha	0.45	2	0.2971768	78	0.22525774
9909	GO:0016877	ligase activity, forming	0.45	2	0.2971768	78	0.22525774
25998	GO:0051716	cellular response to st	0.45	23	3.4175334	1138	3.2864528
19590	GO:0043295	glutathione binding	0.46	1	0.1485884	31	0.08952551
3190	GO:0004532	exoribonuclease activ	0.47	1	0.1485884	32	0.09241343
3265	GO:0004630	phospholipase D activ	0.47	1	0.1485884	32	0.09241343
6942	GO:0009674	potassium:sodium syr	0.47	1	0.1485884	32	0.09241343
9927	GO:0016896	exoribonuclease activ	0.47	1	0.1485884	32	0.09241343
12522	GO:0022820	potassium ion sympor	0.47	1	0.1485884	32	0.09241343
12833	GO:0030275	LRR domain binding	0.47	1	0.1485884	32	0.09241343
23914	GO:0048522 GO:005	positive regulation of d	0.47	1	0.1485884	32	0.09241343
30878	GO:0072522	purine-containing com	0.48	1	0.1485884	33	0.09530135
16738	GO:0034357	photosynthetic membe	0.48	2	0.2971768	83	0.23969735
4844	GO:0006725	cellular aromatic comp	0.49	4	0.5943536	185	0.53426516
9486	GO:0016298	lipase activity	0.49	4	0.5943536	185	0.53426516
9818	GO:0016765 GO:0016	transferase activity, tra	0.49	4	0.5943536	185	0.53426516
2985	GO:0004222	metalloendopeptidase	0.49	1	0.1485884	34	0.09818927
6004	GO:0008536	Ran GTPase binding	0.49	1	0.1485884	34	0.09818927
4327	GO:0006091	generation of precursor	0.49	2	0.2971768	84	0.24258527
19125	GO:0042802	identical protein bindin	0.49	14	2.0802376	697	2.01288
4538	GO:0006364 GO:0006	rRNA processing	0.50	1	0.1485884	35	0.10107719
6355	GO:0008970	phospholipase A1 acti	0.50	1	0.1485884	35	0.10107719
9310	GO:0016072	rRNA metabolic proce	0.50	1	0.1485884	35	0.10107719
11206	GO:0019203	carbohydrate phospho	0.50	1	0.1485884	35	0.10107719
12817	GO:0030258	lipid modification	0.50	1	0.1485884	35	0.10107719
21146	GO:0045544	gibberellin 20-oxidase	0.50	1	0.1485884	35	0.10107719
23199	GO:0047714	galactolipase activity	0.50	1	0.1485884	35	0.10107719
2657	GO:0003727 GO:0003	single-stranded RNA t	0.50	4	0.5943536	188	0.54292893
5768	GO:0008238	exopeptidase activity	0.50	2	0.2971768	86	0.24836111
4916	GO:0006818	hydrogen transport	0.50	6	0.89153045	292	0.84327257
9246	GO:0015992	proton transport	0.50	6	0.89153045	292	0.84327257
4232	GO:0005992	trehalose biosynthetic	0.51	1	0.1485884	36	0.10396511
5902	GO:0008408	3'-5' exonuclease acti	0.51	1	0.1485884	36	0.10396511
6794	GO:0009505	plant-type cell wall	0.51	1	0.1485884	36	0.10396511
8739	GO:0015385 GO:0015	sodium:hydrogen anti	0.51	1	0.1485884	36	0.10396511
9393	GO:0016165	lipoygenase activity	0.51	1	0.1485884	36	0.10396511
20649	GO:0044455	mitochondrial membra	0.51	1	0.1485884	36	0.10396511
4641	GO:0006508	proteolysis	0.51	19	2.8231797	965	2.7868426
3318	GO:0004693 GO:0016	cyclin-dependent prote	0.52	1	0.1485884	37	0.10685303
11202	GO:0019199	transmembrane recep	0.52	10	1.4858841	504	1.4555116
13164	GO:0030695	GTPase regulator acti	0.52	3	0.44576523	142	0.4100846
20630	GO:0044436	thylakoid part	0.52	2	0.2971768	90	0.2599128
4231	GO:0005991	trehalose metabolic pr	0.53	1	0.1485884	38	0.10974095
9308	GO:0016070	RNA metabolic proces	0.53	36	5.3491826	1855	5.3570914

3644	GO:0005102	receptor binding	0.53		2	0.2971768	91	0.2628007
6784	GO:0009451 GO:0016	RNA modification	0.53		2	0.2971768	91	0.2628007
6623	GO:0009260	ribonucleotide biosynt	0.54		1	0.1485884	39	0.11262887
16785	GO:0034404	nucleobase, nucleosid	0.54		2	0.2971768	92	0.26568863
17033	GO:0034654	nucleobase, nucleosid	0.54		2	0.2971768	92	0.26568863
12805	GO:0030246	carbohydrate binding	0.54		5	0.74294204	251	0.7248679
3178	GO:0004519	endonuclease activity	0.54		7	1.0401188	356	1.0280994
9895	GO:0016860	intramolecular oxidore	0.54		3	0.44576523	146	0.42163628
20336	GO:0044085	cellular component bic	0.54		2	0.2971768	93	0.26857653
5891	GO:0008395 GO:0008	steroid hydroxylase ac	0.54		1	0.1485884	40	0.1155168
7021	GO:0009755	hormone-mediated sig	0.54		1	0.1485884	40	0.1155168
9843	GO:0016796	exonuclease activity, d	0.54		1	0.1485884	40	0.1155168
15271	GO:0032870	cellular response to ho	0.54		1	0.1485884	40	0.1155168
16446	GO:0034062	RNA polymerase activ	0.54		1	0.1485884	40	0.1155168
23910	GO:0048518 GO:0043	positive regulation of b	0.54		1	0.1485884	40	0.1155168
3808	GO:0005351 GO:0005	sugar:hydrogen symp	0.55		2	0.2971768	94	0.27146447
3835	GO:0005402	cation:sugar symporte	0.55		2	0.2971768	94	0.27146447
6863	GO:0009579	thylakoid	0.55		2	0.2971768	94	0.27146447
22479	GO:0046983	protein dimerization ad	0.55		10	1.4858841	517	1.4930545
9829	GO:0016779	nucleotidyltransferase	0.55		3	0.44576523	148	0.42741212
22415	GO:0046914	transition metal ion bir	0.55		50	7.4294205	2599	7.5057034
31895	GO:0090304	nucleic acid metabolic	0.55		45	6.6864786	2340	6.7577324
11712	GO:0019748	secondary metabolic p	0.55		2	0.2971768	95	0.27435237
9874	GO:0016835	carbon-oxygen lyase a	0.55		4	0.5943536	202	0.5833598
6666	GO:0009312	oligosaccharide biosyn	0.56		1	0.1485884	42	0.121292636
9370	GO:0016138	glycoside biosynthetic	0.56		1	0.1485884	42	0.121292636
21880	GO:0046351	disaccharide biosynth	0.56		1	0.1485884	42	0.121292636
3200	GO:0004553 GO:0016	hydrolase activity, hyd	0.57		6	0.89153045	312	0.90103096
8679	GO:0015297	antipporter activity	0.57		3	0.44576523	152	0.4389638
8682	GO:0015300	solute:solute antiporte	0.57		3	0.44576523	152	0.4389638
27562	GO:0060589	nucleoside-triphospha	0.57		3	0.44576523	152	0.4389638
8677	GO:0015295	solute:hydrogen symp	0.57		2	0.2971768	98	0.28301615
8681	GO:0015299	solute:hydrogen antip	0.57		2	0.2971768	98	0.28301615
20619	GO:0044425	membrane part	0.57		29	4.309064	1523	4.398302
3307	GO:0004675	transmembrane recep	0.57		7	1.0401188	367	1.0598665
16851	GO:0034470	ncRNA processing	0.58		2	0.2971768	99	0.28590405
17039	GO:0034660	ncRNA metabolic prod	0.58		2	0.2971768	99	0.28590405
4954	GO:0006869	lipid transport	0.58		4	0.5943536	208	0.6006873
8085	GO:0010876	lipid localization	0.58		4	0.5943536	208	0.6006873
5797	GO:0008276	protein methyltransfer	0.58		1	0.1485884	44	0.12706847
9186	GO:0015926	glucosidase activity	0.58		1	0.1485884	44	0.12706847
9753	GO:0016682	oxidoreductase activit	0.58		1	0.1485884	44	0.12706847
29859	GO:0071495	cellular response to er	0.58		1	0.1485884	44	0.12706847
16430	GO:0034046	poly(G) RNA binding	0.58		20	0.2971768	100	0.28879198
7229	GO:0009987 GO:0008	cellular process	0.58		204	30.312037	10601	30.614838
8666	GO:0015276	ligand-gated ion chan	0.59		1	0.1485884	45	0.1299564
9893	GO:0016857	racemase and epimer	0.59		1	0.1485884	45	0.1299564
12530	GO:0022834	ligand-gated channel a	0.59		1	0.1485884	45	0.1299564
18956	GO:0042626	ATPase activity, coup	0.59		4	0.5943536	211	0.6093511
3177	GO:0004518	nuclease activity	0.59		8	1.1887072	427	1.2331418
9699	GO:0016616	oxidoreductase activit	0.59		5	0.74294204	266	0.7681867
9861	GO:0016820	hydrolase activity, acti	0.59		4	0.5943536	212	0.612239
4329	GO:0006096 GO:0019	glycolysis	0.59		1	0.1485884	46	0.13284431
6999	GO:0009733	response to auxin stim	0.59		1	0.1485884	46	0.13284431
12498	GO:0022613	ribonucleoprotein com	0.59		1	0.1485884	46	0.13284431
18614	GO:0042254 GO:0007	ribosome biogenesis	0.59		1	0.1485884	46	0.13284431
26845	GO:0052689	carboxylic ester hydro	0.60		10	1.4858841	538	1.5537009
3421	GO:0004812 GO:0011	aminoacyl-tRNA ligase	0.60		1	0.1485884	47	0.13573223
8497	GO:0015079 GO:0022	potassium ion transme	0.60		1	0.1485884	47	0.13573223
9907	GO:0016875	ligase activity, forming	0.60		1	0.1485884	47	0.13573223
9908	GO:0016876	ligase activity, forming	0.60		1	0.1485884	47	0.13573223
9709	GO:0016627	oxidoreductase activit	0.60		2	0.2971768	104	0.30034366
4849	GO:0006730 GO:0019	one-carbon metabolic	0.61		6	0.89153045	325	0.93857396
9869	GO:0016829	lyase activity	0.61		9	1.3372957	488	1.4093049
4188	GO:0005938	cell cortex	0.61		1	0.1485884	48	0.13862015
20642	GO:0044448	cell cortex part	0.61		1	0.1485884	48	0.13862015
28930	GO:0070566	adenylyltransferase ac	0.61		1	0.1485884	48	0.13862015
113	GO:0000145	exocyst	0.61		1	0.1485884	48	0.13862015
18582	GO:0042221	response to chemical	0.62		6	0.89153045	328	0.94723773
3844	GO:0005451	monovalent cation:hyd	0.62		1	0.1485884	49	0.14150807
31421	GO:0080044	quercetin 7-O-glucosy	0.62		1	0.1485884	49	0.14150807
5055	GO:0006996	organelle organization	0.62		3	0.44576523	164	0.47361887
5909	GO:0008415	acyltransferase activit	0.62		6	0.89153045	330	0.95301354
4459	GO:0006259 GO:0055	DNA metabolic proces	0.62		9	1.3372957	493	1.4237444
3185	GO:0004527 GO:0008	exonuclease activity	0.63		1	0.1485884	50	0.14439599
4622	GO:0006479	protein methylation	0.63		1	0.1485884	50	0.14439599
5750	GO:0008213	protein alkylation	0.63		1	0.1485884	50	0.14439599
9783	GO:0016722	oxidoreductase activit	0.63		1	0.1485884	50	0.14439599
9993	GO:0017016	Ras GTPase binding	0.63		1	0.1485884	50	0.14439599
29674	GO:0071310	cellular response to or	0.63		1	0.1485884	50	0.14439599
13656	GO:0031224	intrinsic to membrane	0.63		22	3.268945	1193	3.4452884
22375	GO:0046872	metal ion binding	0.63		56	8.3209505	2985	8.6204405
7173	GO:0009922	fatty acid elongase ac	0.63		1	0.1485884	51	0.14728391
22410	GO:0046907	intracellular transport	0.63		1	0.1485884	51	0.14728391
25925	GO:0051641	cellular localization	0.63		1	0.1485884	51	0.14728391
25933	GO:0051649	establishment of local	0.63		1	0.1485884	51	0.14728391
5097	GO:0007049	cell cycle	0.64		1	0.1485884	52	0.15017183
20287	GO:0044036	cell wall macromolecu	0.64		1	0.1485884	52	0.15017183
9812	GO:0016758	transferase activity, tra	0.64		9	1.3372957	501	1.4468478
19470	GO:0043167	ion binding	0.64		56	8.3209505	2997	8.655096
19472	GO:0043169	cation binding	0.64		56	8.3209505	2997	8.655096
5070	GO:0007017	microtubule-based pro	0.64		2	0.2971768	112	0.32344702
5071	GO:0007018	microtubule-based mc	0.64		2	0.2971768	112	0.32344702
8680	GO:0015298	solute:cation antiporte	0.64		2	0.2971768	112	0.32344702
9730	GO:0016651	oxidoreductase activit	0.64		2	0.2971768	112	0.32344702



29081	GO:0070717	poly-purine tract binding	0.64	2	0.2971768	112	0.32344702
17024	GO:0034645 GO:0034645	cellular macromolecule	0.65	37	5.4977713	1999	5.7729516
9750	GO:0016679	oxidoreductase activity	0.65	1	0.1485884	53	0.15305975
29246	GO:0070882	cellular cell wall organization	0.65	1	0.1485884	53	0.15305975
6428	GO:0009059 GO:0043492	macromolecule biosynthesis	0.65	37	5.4977713	2003	5.7845035
30205	GO:0071841	cellular component organization	0.65	5	0.74294204	285	0.8230572
3156	GO:0004497	monooxygenase activity	0.65	3	0.44576523	172	0.49672222
29251	GO:0070887	cellular response to chemical stimulus	0.65	1	0.1485884	54	0.15594767
9267	GO:0016021	integral to membrane	0.66	20	2.9717681	1103	3.1853757
3476	GO:0004872 GO:0010001	receptor activity	0.66	12	1.7830609	672	1.9406822
4224	GO:0005984	disaccharide metabolism	0.67	1	0.1485884	56	0.16172351
9369	GO:0016137	glycoside metabolic process	0.67	1	0.1485884	56	0.16172351
9883	GO:0016846	carbon-sulfur lyase activity	0.67	1	0.1485884	56	0.16172351
13697	GO:0031267	small GTPase binding	0.67	1	0.1485884	56	0.16172351
3955	GO:0005634	nucleus	0.67	26	3.8632987	1433	4.138389
20533	GO:0044283	small molecule biosynthesis	0.67	6	0.89153045	347	1.0021082
3475	GO:0004871 GO:0005082	signal transducer activity	0.67	14	2.0802376	787	2.2727928
27063	GO:0060089	molecular transducer activity	0.67	14	2.0802376	787	2.2727928
25416	GO:0051119	sugar transmembrane transport	0.67	2	0.2971768	118	0.34077454
19758	GO:0043492	ATPase activity, coupled	0.67	4	0.5943536	235	0.67866117
5715	GO:0008171	O-methyltransferase activity	0.67	1	0.1485884	57	0.16461143
7557	GO:0010333	terpene synthase activity	0.67	1	0.1485884	57	0.16461143
9813	GO:0016759	cellulose synthase activity	0.67	1	0.1485884	57	0.16461143
3877	GO:0005516	calmodulin binding	0.68	4	0.5943536	236	0.6815491
2628	GO:0003677	DNA binding	0.68	22	3.268945	1224	3.534814
9824	GO:0016773	phosphotransferase activity	0.68	27	4.011887	1493	4.311664
3304	GO:0004672 GO:0050822	protein kinase activity	0.68	24	3.5661218	1333	3.8495972
3323	GO:0004702	receptor signaling protein activity	0.68	1	0.1485884	58	0.16749935
4913	GO:0006814 GO:0006814	sodium ion transport	0.68	1	0.1485884	58	0.16749935
6665	GO:0009311	oligosaccharide metabolism	0.68	1	0.1485884	58	0.16749935
8499	GO:0015081 GO:0022827	sodium ion transmembrane transport	0.68	1	0.1485884	58	0.16749935
8558	GO:0015145	monosaccharide transport	0.68	1	0.1485884	58	0.16749935
9018	GO:0015749	monosaccharide transport	0.68	1	0.1485884	58	0.16749935
18086	GO:0035725	sodium ion transmembrane transport	0.68	1	0.1485884	58	0.16749935
29800	GO:0071436	sodium ion export	0.68	1	0.1485884	58	0.16749935
30700	GO:0072341	modified amino acid biosynthesis	0.69	1	0.1485884	59	0.17038727
5195	GO:0007165 GO:0022827	signal transduction	0.69	17	2.526003	961	2.775291
12602	GO:0023052 GO:0022827	signaling	0.69	17	2.526003	961	2.775291
9823	GO:0016772	transferase activity, transmembrane	0.69	35	5.2005944	1932	5.579461
2980	GO:0004185	serine-type carboxypeptidase activity	0.69	1	0.1485884	60	0.17327519
5652	GO:0008081 GO:0004185	phosphoric diester hydrolase activity	0.69	1	0.1485884	60	0.17327519
14811	GO:0032403	protein complex binding	0.69	1	0.1485884	60	0.17327519
25319	GO:0051020	GTPase binding	0.69	1	0.1485884	60	0.17327519
28375	GO:0070008	serine-type exopeptidase activity	0.69	1	0.1485884	60	0.17327519
5610	GO:0008026	ATP-dependent helicase activity	0.69	3	0.44576523	183	0.52848935
28401	GO:0070035	purine NTP-dependent helicase activity	0.69	3	0.44576523	183	0.52848935
4768	GO:0006644	phospholipid metabolism	0.70	1	0.1485884	61	0.1761631
2978	GO:0004180	carboxypeptidase activity	0.70	1	0.1485884	62	0.17905103
6018	GO:0008559 GO:0005082	xenobiotic-transporting activity	0.70	1	0.1485884	62	0.17905103
11210	GO:0019207	kinase regulator activity	0.70	1	0.1485884	62	0.17905103
17457	GO:0035091	phosphatidylinositol binding	0.70	1	0.1485884	62	0.17905103
19225	GO:0042908	xenobiotic transport	0.70	1	0.1485884	62	0.17905103
19227	GO:0042910	xenobiotic transporter activity	0.70	1	0.1485884	62	0.17905103
2648	GO:0003712	transcription cofactor activity	0.71	2	0.2971768	126	0.3638779
634	GO:0000988	protein binding transcription factor activity	0.71	2	0.2971768	126	0.3638779
635	GO:0000989	transcription factor binding	0.71	2	0.2971768	126	0.3638779
20512	GO:0044262 GO:0005082	cellular carbohydrate transport	0.71	4	0.5943536	248	0.7162041
3068	GO:0004386	helicase activity	0.71	3	0.44576523	189	0.54581684
25820	GO:0051536	iron-sulfur cluster binding	0.72	1	0.1485884	64	0.18482687
25824	GO:0051540	metal cluster binding	0.72	1	0.1485884	64	0.18482687
20521	GO:0044271	cellular nitrogen compound transport	0.72	6	0.89153045	367	1.0598665
5840	GO:0008324	cation transmembrane transport	0.72	9	1.3372957	538	1.5537009
11616	GO:0019637	organophosphate metabolism	0.72	1	0.1485884	65	0.18771479
4561	GO:0006399	tRNA metabolic process	0.73	1	0.1485884	66	0.1906027
5615	GO:0008033	tRNA processing	0.73	1	0.1485884	66	0.1906027
9890	GO:0016854	racemase and epimerase activity	0.73	1	0.1485884	66	0.1906027
30206	GO:0071842	cellular component organization	0.73	3	0.44576523	193	0.5573685
9837	GO:0016788	hydrolase activity, acting on ester bonds	0.73	27	4.011887	1534	4.430069
6662	GO:0009308	amine metabolic process	0.73	5	0.74294204	314	0.9068068
2999	GO:0004312	fatty acid synthase activity	0.74	1	0.1485884	68	0.19637854
7691	GO:0010467	gene expression	0.74	35	5.2005944	1974	5.7007537
5809	GO:0008289	lipid binding	0.74	4	0.5943536	258	0.74508333
31420	GO:0080043	quercetin 3-O-glucosyltransferase activity	0.74	1	0.1485884	69	0.19926646
10244	GO:0018130	heterocycle biosynthesis	0.75	3	0.44576523	199	0.57469606
8749	GO:0015399	primary active transmembrane transport	0.75	4	0.5943536	260	0.75085914
8753	GO:0015405	P-P-bond-hydrolysis-coupled transmembrane transport	0.75	4	0.5943536	260	0.75085914
9853	GO:0016811	hydrolase activity, acting on ester bonds	0.75	1	0.1485884	70	0.20215438
9796	GO:0016741	transferase activity, transmembrane	0.75	4	0.5943536	261	0.7537471
20499	GO:0044249	cellular biosynthetic process	0.75	47	6.9836555	2635	7.6096687
6427	GO:0009058	biosynthetic process	0.75	50	7.4294205	2796	8.074624
4612	GO:0006468	protein phosphorylation	0.75	39	5.794948	2205	6.367863
3306	GO:0004674 GO:0005082	protein serine/threonine phosphorylation	0.76	18	2.6745913	1062	3.0669708
9839	GO:0016791 GO:0016791	phosphatase activity	0.76	6	0.89153045	383	1.1060733
3895	GO:0005543	phospholipid binding	0.76	2	0.2971768	140	0.40430877
9811	GO:0016757 GO:0010001	transferase activity, transmembrane	0.76	12	1.7830609	729	2.1052935
4247	GO:0006007	glucose catabolic process	0.76	1	0.1485884	73	0.21081814
11313	GO:0019320	hexose catabolic process	0.76	1	0.1485884	73	0.21081814
20525	GO:0044275	cellular carbohydrate transport	0.76	1	0.1485884	73	0.21081814
21726	GO:0046164	alcohol catabolic process	0.76	1	0.1485884	73	0.21081814
21894	GO:0046365	monosaccharide catabolic process	0.76	1	0.1485884	73	0.21081814
18912	GO:0042578	phosphoric ester hydrolysis	0.76	7	1.0401188	444	1.2822365
6046	GO:0008610	lipid biosynthetic process	0.76	2	0.2971768	141	0.4071967
8557	GO:0015144	carbohydrate transmembrane transport	0.77	2	0.2971768	143	0.41297254
16602	GO:0034219	carbohydrate transmembrane transport	0.77	2	0.2971768	143	0.41297254
8810	GO:0015491	cation:cation antiporter activity	0.77	1	0.1485884	75	0.21659398

9488	GO:0016301	kinase activity	0.78	30	4.457652	1740	5.0249805
3873	GO:0005507	copper ion binding	0.78	2	0.2971768	146	0.42163628
9493	GO:0016310	phosphorylation	0.78	44	6.53789	2504	7.2313514
9877	GO:0016838	carbon-oxygen lyase a	0.78	1	0.1485884	77	0.22236982
6071	GO:0008643 GO:0006	carbohydrate transport	0.78	2	0.2971768	147	0.42452422
2819	GO:0004004	ATP-dependent RNA	0.78	1	0.1485884	78	0.22525774
5725	GO:0008186 GO:0004	RNA-dependent ATPa	0.78	1	0.1485884	78	0.22525774
8495	GO:0015077	monovalent inorganic	0.79	3	0.44576523	214	0.6180149
4649	GO:0006520 GO:0006	cellular amino acid me	0.79	4	0.5943536	277	0.7999538
2654	GO:0003724	RNA helicase activity	0.79	1	0.1485884	80	0.2310336
9655	GO:0016568	chromatin modifier	0.79	1	0.1485884	80	0.2310336
9656	GO:0016569	covalent chromatin m	0.79	1	0.1485884	80	0.2310336
9657	GO:0016570	histone modification	0.79	1	0.1485884	80	0.2310336
9682	GO:0016597	amino acid binding	0.79	1	0.1485884	80	0.2310336
19479	GO:0043176	amine binding	0.79	1	0.1485884	80	0.2310336
9845	GO:0016798	hydrolase activity, acti	0.79	6	0.89153045	401	1.1580559
9795	GO:0016740	transferase activity	0.80	67	9.955423	3764	10.870131
18674	GO:0042325	regulation of phosphor	0.80	1	0.1485884	81	0.23392151
6991	GO:0009725	response to hormone	0.80	1	0.1485884	82	0.23680943
4558	GO:0006396 GO:0006	RNA processing	0.80	3	0.44576523	219	0.63245445
3048	GO:0004364	glutathione transferase	0.81	1	0.1485884	84	0.24258527
5624	GO:0008047	enzyme activator activ	0.81	1	0.1485884	85	0.24547319
11222	GO:0019220	regulation of phosphat	0.81	1	0.1485884	85	0.24547319
25471	GO:0051174	regulation of phosphor	0.81	1	0.1485884	85	0.24547319
4460	GO:0006260 GO:0055	DNA replication	0.81	3	0.44576523	224	0.64689404
3888	GO:0005529	sugar binding	0.81	2	0.2971768	158	0.45629135
6985	GO:0009719	response to endogeno	0.82	1	0.1485884	86	0.24836111
4246	GO:0006006	glucose metabolic pro	0.82	1	0.1485884	87	0.25124902
4990	GO:0006915 GO:0008	apoptosis	0.82	3	0.44576523	227	0.6555578
8496	GO:0015078	hydrogen ion transme	0.82	2	0.2971768	160	0.4620672
4032	GO:0005743	mitochondrial inner me	0.82	1	0.1485884	88	0.25413695
119	GO:0000151	ubiquitin ligase comple	0.82	1	0.1485884	88	0.25413695
6796	GO:0009507	chloroplast	0.82	3	0.44576523	229	0.6613336
10304	GO:0018193	peptidyl-amino acid m	0.83	1	0.1485884	89	0.25702485
4911	GO:0006812 GO:0006	cation transport	0.83	10	1.4858841	662	1.9118029
9294	GO:0016052 GO:0006	carbohydrate catabolic	0.83	1	0.1485884	91	0.2628007
30204	GO:0071840	cellular component org	0.83	5	0.74294204	362	1.045427
4476	GO:0006278	RNA-dependent DNA	0.84	2	0.2971768	166	0.4793947
9494	GO:0016311	dephosphorylation	0.84	6	0.89153045	425	1.227366
11803	GO:0019866	organelle inner memb	0.84	1	0.1485884	94	0.27146447
20356	GO:0044106	cellular amine metabo	0.84	4	0.5943536	303	0.8750397
6077	GO:0008652	cellular amino acid bic	0.84	2	0.2971768	169	0.48805845
18633	GO:0042277	peptide binding	0.85	1	0.1485884	95	0.27435237
5756	GO:0008219	cell death	0.85	3	0.44576523	239	0.69021285
8209	GO:0012501 GO:0018	programmed cell deat	0.85	3	0.44576523	239	0.69021285
9462	GO:0016265	death	0.85	3	0.44576523	239	0.69021285
3341	GO:0004722 GO:0006	protein serine/threonin	0.85	2	0.2971768	171	0.4938343
9889	GO:0016853	isomerase activity	0.85	4	0.5943536	306	0.8837035
4897	GO:0006793	phosphorus metabolic	0.85	50	7.4294205	2925	8.4471655
4900	GO:0006796	phosphate metabolic p	0.85	50	7.4294205	2925	8.4471655
5791	GO:0008270	zinc ion binding	0.85	31	4.6062407	1880	5.4292893
2653	GO:0003723	RNA binding	0.85	12	1.7830609	797	2.3016722
12608	GO:0030001	metal ion transport	0.85	5	0.74294204	374	1.080082
13829	GO:0031406	carboxylic acid binding	0.85	1	0.1485884	98	0.28301615
4067	GO:0005783	endoplasmic reticulum	0.85	2	0.2971768	174	0.50249803
5712	GO:0008168 GO:0004	methyltransferase acti	0.86	3	0.44576523	244	0.7046524
3885	GO:0005525	GTP binding	0.86	3	0.44576523	245	0.70754033
11032	GO:0019001	guanyl nucleotide bind	0.86	3	0.44576523	245	0.70754033
14967	GO:0032561	guanyl ribonucleotide	0.86	3	0.44576523	245	0.70754033
7271	GO:0010033	response to organic st	0.86	1	0.1485884	100	0.28879198
11787	GO:0019842	vitamin binding	0.86	2	0.2971768	177	0.5111618
6824	GO:0009536	plastid	0.86	3	0.44576523	247	0.7133162
11311	GO:0019318	hexose metabolic prod	0.86	1	0.1485884	101	0.2916799
2627	GO:0003676	nucleic acid binding	0.86	41	6.092125	2453	7.0840673
13082	GO:0030599	pectinesterase activity	0.86	2	0.2971768	178	0.5140497
6166	GO:0008757	S-adenosylmethionine	0.87	2	0.2971768	180	0.5198256
6663	GO:0009309	amine biosynthetic pro	0.87	2	0.2971768	181	0.5227135
19392	GO:0043085	positive regulation of d	0.87	1	0.1485884	104	0.30034366
20343	GO:0044093	positive regulation of r	0.87	1	0.1485884	104	0.30034366
2668	GO:0003779	actin binding	0.87	1	0.1485884	105	0.3032316
20505	GO:0044255	cellular lipid metabolic	0.88	2	0.2971768	184	0.53137726
20487	GO:0044237	cellular metabolic prod	0.88	147	21.842497	8185	23.637625
3942	GO:0005618	cell wall	0.88	1	0.1485884	107	0.30900744
19473	GO:0043170 GO:0043	macromolecule metab	0.88	116	17.236256	6553	18.92454
11833	GO:0019904	protein domain speci	0.88	1	0.1485884	109	0.31478328
9285	GO:0016043	cellular component org	0.88	3	0.44576523	261	0.7537471
15436	GO:0033036	macromolecule localiz	0.89	5	0.74294204	397	1.1465042
12868	GO:0030312	external encapsulating	0.89	1	0.1485884	111	0.3205591
4512	GO:0006325	chromatin organization	0.89	1	0.1485884	112	0.32344702
25568	GO:0051276 GO:0007	chromosome organiza	0.89	1	0.1485884	112	0.32344702
29918	GO:0071554	cell wall organization d	0.89	1	0.1485884	112	0.32344702
19686	GO:0043414	macromolecule methy	0.89	1	0.1485884	113	0.32633495
14379	GO:0031966	mitochondrial membra	0.89	1	0.1485884	114	0.32922286
22478	GO:0046982	protein heterodimeriza	0.89	1	0.1485884	114	0.32922286
9535	GO:0016407	acetyltransferase activ	0.90	1	0.1485884	115	0.3321108
9871	GO:0016831	carboxy-lyase activity	0.90	1	0.1485884	115	0.3321108
20510	GO:0044260 GO:0034	cellular macromolecul	0.90	97	14.413075	5577	16.105928
3340	GO:0004721	phosphoprotein phosph	0.90	2	0.2971768	199	0.57469606
4236	GO:0005996	monosaccharide meta	0.91	1	0.1485884	125	0.36099
12741	GO:0030170	pyridoxal phosphate b	0.92	1	0.1485884	126	0.3638779
28643	GO:0070279	vitamin B6 binding	0.92	1	0.1485884	126	0.3638779
14667	GO:0032259	methylation	0.92	3	0.44576523	285	0.8230572
9295	GO:0016053	organic acid biosynthe	0.92	2	0.2971768	211	0.6093511
21922	GO:0046394	carboxylic acid biosyn	0.92	2	0.2971768	211	0.6093511
22376	GO:0046873	metal ion transmembr	0.92	2	0.2971768	213	0.6151269



9852	GO:0016810	hydrolase activity, acti	0.93	1	0.1485884	134	0.38698125
4320	GO:0006082	organic acid metabolic	0.93	4	0.5943536	369	1.0656425
11716	GO:0019752	carboxylic acid metab	0.93	4	0.5943536	369	1.0656425
19707	GO:0043436	oxoacid metabolic pro	0.93	4	0.5943536	369	1.0656425
5019	GO:0006952 GO:0002	defense response	0.93	2	0.2971768	221	0.63823026
18541	GO:0042180	cellular ketone metabo	0.93	4	0.5943536	375	1.0829699
13531	GO:0031072	heat shock protein bin	0.94	2	0.2971768	230	0.6642216
4304	GO:0006066	alcohol metabolic proc	0.94	1	0.1485884	143	0.41297254
11522	GO:0019538 GO:0006	protein metabolic proc	0.94	68	10.104012	4134	11.938661
4029	GO:0005740	mitochondrial envelop	0.95	1	0.1485884	151	0.4360759
19526	GO:0043227	membrane-bounded o	0.95	32	4.754829	2142	6.185924
19530	GO:0043231	intracellular membran	0.95	32	4.754829	2142	6.185924
3449	GO:0004842 GO:0004	ubiquitin-protein ligase	0.95	3	0.44576523	326	0.94146186
4609	GO:0006464	protein modification pr	0.95	43	6.389302	2781	8.031305
5661	GO:0008092	cytoskeletal protein bir	0.96	2	0.2971768	249	0.719092
19684	GO:0043412	macromolecule modifi	0.96	45	6.6864786	2900	8.374968
19831	GO:0043565	sequence-specific DN	0.96	1	0.1485884	159	0.45917925
9654	GO:0016567	protein ubiquitination	0.96	3	0.44576523	332	0.9587894
12572	GO:0022890 GO:0013	inorganic cation transp	0.96	3	0.44576523	332	0.9587894
14854	GO:0032446	protein modification by	0.96	3	0.44576523	332	0.9587894
29011	GO:0070647	protein modification by	0.96	3	0.44576523	332	0.9587894
9870	GO:0016830	carbon-carbon lyase a	0.96	1	0.1485884	161	0.4649551
5764	GO:0008234 GO:0004	cysteine-type peptidas	0.96	1	0.1485884	163	0.47073093
20623	GO:0044429	mitochondrial part	0.96	1	0.1485884	165	0.47650677
11747	GO:0019787 GO:0006	small conjugating prot	0.96	3	0.44576523	339	0.9790048
30306	GO:0071944	cell periphery	0.96	2	0.2971768	259	0.74797124
3946	GO:0005623	cell	0.97	140	20.802378	8227	23.758917
20657	GO:0044464	cell part	0.97	140	20.802378	8227	23.758917
3874	GO:0005509	calcium ion binding	0.97	2	0.2971768	279	0.8057296
8466	GO:0015031 GO:0013	protein transport	0.97	1	0.1485884	185	0.53426516
20820	GO:0045184	establishment of prote	0.97	1	0.1485884	185	0.53426516
20517	GO:0044267	cellular protein metabo	0.97	49	7.2808323	3225	9.313541
3863	GO:0005488	binding	0.98	246	36.55275	13903	40.15075
5669	GO:0008104	protein localization	0.98	1	0.1485884	189	0.54581684
9906	GO:0016874	ligase activity	0.98	6	0.89153045	597	1.7240882
14380	GO:0031967	organelle envelope	0.98	1	0.1485884	201	0.5804719
14387	GO:0031975	envelope	0.98	1	0.1485884	205	0.59202355
9913	GO:0016881	acid-amino acid ligase	0.98	3	0.44576523	391	1.1291766
4028	GO:0005739	mitochondrion	0.99	1	0.1485884	219	0.63245445
13547	GO:0031090	organelle membrane	0.99	1	0.1485884	224	0.64689404
3903	GO:0005575 GO:0006	cellular component	0.99	140	20.802378	8515	24.590637
9911	GO:0016879	ligase activity, forming	0.99	3	0.44576523	456	1.3168914
3716	GO:0005198	structural molecule ac	1.00	2	0.2971768	393	1.1349525
3876	GO:0005515 GO:0045	protein binding	1.00	108	16.047548	6933	20.021948
19533	GO:0043234	protein complex	1.00	5	0.74294204	848	2.448956
19525	GO:0043226	organelle	1.00	34	5.052006	3013	8.701303
19528	GO:0043229	intracellular organelle	1.00	34	5.052006	3013	8.701303
20618	GO:0044424	intracellular part	1.00	47	6.9836555	3853	11.127155
4027	GO:0005737	cytoplasm	1.00	18	2.6745913	2001	5.7787275
3945	GO:0005622	intracellular	1.00	59	8.766716	4751	13.720507
4109	GO:0005840 GO:0033	ribosome	1.00	2	0.2971768	682	1.9695613
13018	GO:0030529	ribonucleoprotein com	1.00	2	0.2971768	741	2.1399486
20640	GO:0044446	intracellular organelle	1.00	1	0.1485884	710	2.0504231
20616	GO:0044422	organelle part	1.00	1	0.1485884	712	2.0561988
19527	GO:0043228	non-membrane-bound	1.00	2	0.2971768	923	2.66555
19531	GO:0043232	intracellular non-mem	1.00	2	0.2971768	923	2.66555
20638	GO:0044444	cytoplasmic part	1.00	9	1.3372957	1644	4.7477403
15392	GO:0032991	macromolecular comp	1.00	7	1.0401188	1616	4.666878

GO ID	GO ACCESSION	GO Term	p-value	Count in Selection	% Count in Selection	Count in Total	% Count in Total
5704	GO:008150 GO:000004	biological process	0.00	449	72.41936	22215	64.155136
28101	GO:0061135	endopeptidase regulator acti	0.00	10	1.6129032	95	0.27435237
8159	GO:0010951	negative regulation of endop	0.00	10	1.6129032	95	0.27435237
3472	GO:0004866	endopeptidase inhibitor activ	0.00	10	1.6129032	95	0.27435237
26712	GO:0052548	regulation of endopeptidase	0.00	10	1.6129032	95	0.27435237
3473	GO:0004867	serine-type endopeptidase ir	0.00	8	1.2903225	66	0.1906027
25636	GO:0051346	negative regulation of hydroly	0.00	10	1.6129032	110	0.31767118
12946	GO:0030414	peptidase inhibitor activity	0.00	10	1.6129032	110	0.31767118
7690	GO:0010466	negative regulation of peptid	0.00	10	1.6129032	110	0.31767118
26711	GO:0052547	regulation of peptidase activ	0.00	10	1.6129032	112	0.32344702
28100	GO:0061134	peptidase regulator activity	0.00	10	1.6129032	112	0.32344702
3874	GO:0005509	calcium ion binding	0.00	16	2.580645	279	0.8057296
25626	GO:0051336	regulation of hydrolase activ	0.00	12	1.9354838	196	0.5660323
3167	GO:0004508	steroid 17-alpha-monooxyge	0.00	2	0.32258064	2	0.00577584
3464	GO:0004857	enzyme inhibitor activity	0.00	10	1.6129032	157	0.4534034
3048	GO:0004364	glutathione transferase activ	0.00	7	1.1290323	84	0.24258527
4476	GO:0006278	RNA-dependent DNA replica	0.00	10	1.6129032	166	0.4793947
3877	GO:0005516	calmodulin binding	0.00	12	1.9354838	236	0.6815491
8919	GO:0015645	fatty acid ligase activity	0.00	4	0.6451613	27	0.077973835
9816	GO:0016762	xyloglucan:xyloglucosyl trans	0.00	4	0.6451613	27	0.077973835
9869	GO:0016829	lyase activity	0.00	19	3.064516	488	1.4093049
6932	GO:0009664	plant-type cell wall organizat	0.00	5	0.8064516	50	0.14439599
5096	GO:0007047	cellular cell wall organization	0.00	5	0.8064516	50	0.14439599
20857	GO:0045229	external encapsulating struct	0.00	5	0.8064516	50	0.14439599
30033	GO:0071669	plant-type cell wall organizat	0.00	5	0.8064516	50	0.14439599
12805	GO:0030246	carbohydrate binding	0.00	12	1.9354838	251	0.7248679
19393	GO:0043086	negative regulation of catalyt	0.00	10	1.6129032	188	0.54292893
20342	GO:0044092	negative regulation of molec	0.00	10	1.6129032	188	0.54292893
14101	GO:0031683	G-protein beta/gamma-subu	0.00	3	0.48387095	15	0.043318797
4460	GO:0006260 GO:0055133	DNA replication	0.00	11	1.7741935	224	0.64689404
29246	GO:0070882	cellular cell wall organization	0.00	5	0.8064516	53	0.15035975
9422	GO:0016209	antioxidant activity	0.00	9	1.451613	165	0.47650677
3242	GO:0004601 GO:0016685	peroxidase activity	0.00	8	1.2903225	135	0.38986918
9754	GO:0016684	oxidoreductase activity, actin	0.00	8	1.2903225	135	0.38986918
11224	GO:0019222	regulation of metabolic proc	0.00	76	12.258064	3115	8.995871
4459	GO:0006259 GO:0055132	DNA metabolic process	0.00	18	2.903226	493	1.4237444
29919	GO:0071555	cell wall organization	0.00	5	0.8064516	58	0.16749935
9393	GO:0016165	lipoygenase activity	0.00	4	0.6451613	36	0.10396511
29918	GO:0071554	cell wall organization or biog	0.00	7	1.1290323	112	0.32344702
8096	GO:0015828	tyrosine transport	0.00	2	0.32258064	6	0.01732752
8586	GO:0015173	aromatic amino acid transme	0.00	2	0.32258064	6	0.01732752
9070	GO:0015801	aromatic amino acid transpo	0.00	2	0.32258064	6	0.01732752
3777	GO:0005302 GO:0015508	L-tyrosine transmembrane tr	0.00	2	0.32258064	6	0.01732752
3904	GO:0005576	extracellular region	0.00	9	1.451613	178	0.5140497
21331	GO:0045735	nutrient reservoir activity	0.01	6	0.9677419	89	0.25702485
5705	GO:0008152	metabolic process	0.01	344	55.48387	17432	50.34222
3129	GO:0004467	long-chain fatty acid-CoA lig	0.01	3	0.48387095	21	0.060646318
9818	GO:0016765 GO:0016766	transferase activity, transferr	0.01	9	1.451613	185	0.53426516
6884	GO:0009607	response to biotic stimulus	0.01	7	1.1290323	122	0.3523262
8489	GO:0015066	alpha-amylase inhibitor activ	0.01	3	0.48387095	22	0.06353424
5636	GO:0008061	chitin binding	0.01	3	0.48387095	23	0.06642216
3888	GO:0005529	sugar binding	0.01	8	1.2903225	158	0.45629135
4530	GO:0006355 GO:0032583	regulation of transcription, Df	0.01	63	10.16129	2591	7.4826
25544	GO:0051252	regulation of RNA metabolic	0.01	63	10.16129	2593	7.488376
6248	GO:0008843	endochitinase activity	0.01	3	0.48387095	24	0.06931008
3213	GO:0004568	chitinase activity	0.01	3	0.48387095	24	0.06931008
7141	GO:0009889	regulation of biosynthetic pro	0.01	63	10.16129	2605	7.523031
13756	GO:0031326	regulation of cellular biosynth	0.01	63	10.16129	2605	7.523031
32213	GO:2000112	regulation of cellular macrom	0.01	63	10.16129	2605	7.523031
7772	GO:0010556	regulation of macromolecule	0.01	63	10.16129	2605	7.523031
9764	GO:0016701	oxidoreductase activity, actin	0.01	5	0.8064516	72	0.20793022
8493	GO:0015074	DNA integration	0.01	4	0.6451613	47	0.13573223
2864	GO:0004058 GO:0016400	aromatic-L-amino-acid deca	0.01	2	0.32258064	9	0.025991278
25094	GO:0050789 GO:0050791	regulation of biological proc	0.01	97	15.645162	4315	12.461374
13753	GO:0031323	regulation of cellular metabo	0.01	66	10.645162	2770	7.999538
11221	GO:0019219	regulation of nucleobase, nu	0.01	64	10.32258	2675	7.7251854
25468	GO:0051171	regulation of nitrogen compo	0.01	64	10.32258	2675	7.7251854
28364	GO:0065007	biological regulation	0.01	98	15.806452	4376	12.637537
7692	GO:0010468	regulation of gene expressio	0.01	63	10.16129	2635	7.6096687
21148	GO:0045547	dehydrodichliphosphate	0.01	2	0.32258064	10	0.0288792
23116	GO:0047631	ADP-ribose diphosphatase a	0.01	2	0.32258064	10	0.0288792
9909	GO:0016877	ligase activity, forming carb	0.01	5	0.8064516	78	0.22525774
9845	GO:0016798	hydrolase activity, acting on	0.01	14	2.2580645	401	1.1580559
27228	GO:0060255	regulation of macromolecule	0.01	63	10.16129	2660	7.6818666
31465	GO:0080090	regulation of primary metabo	0.01	64	10.32258	2710	7.826263
13082	GO:0030599	pectinesterase activity	0.02	8	1.2903225	178	0.5140497
5702	GO:0008146	sulfotransferase activity	0.02	4	0.6451613	54	0.15594767
9871	GO:0016831	carboxy-lyase activity	0.02	6	0.9677419	115	0.3321108
26845	GO:0052689	carboxylic ester hydrolase ac	0.02	17	2.7419365	538	1.5537009
6424	GO:0009055 GO:0009053	electron carrier activity	0.02	7	1.1290323	154	0.44473964
25098	GO:0050794 GO:0051244	regulation of cellular process	0.02	88	14.193548	3987	11.514136
12806	GO:0030247	polysaccharide binding	0.02	3	0.48387095	35	0.10107719
1169	GO:0001871	pattern binding	0.02	3	0.48387095	35	0.10107719
11157	GO:0019144	ADP-sugar diphosphatase a	0.03	2	0.32258064	14	0.040430877
9870	GO:0016830	carbon-carbon lyase activity	0.03	7	1.1290323	161	0.4649551
9765	GO:0016702	oxidoreductase activity, actin	0.03	4	0.6451613	66	0.1906027
3382	GO:0004768 GO:0016214	stearyl-CoA 9-desaturase a	0.03	2	0.32258064	16	0.046206716
9427	GO:0016215	CoA desaturase activity	0.03	2	0.32258064	16	0.046206716
26959	GO:0055114	oxidation-reduction process	0.03	57	9.193548	2490	7.1909204
5952	GO:0008470	isovaleryl-CoA dehydrogena	0.04	1	0.16129032	2	0.00577584
6593	GO:0009229	thiamine diphosphate biosyn	0.04	1	0.16129032	2	0.00577584
9558	GO:0016433	rRNA (adenine) methyltransf	0.04	1	0.16129032	2	0.00577584
9595	GO:0016485	protein processing	0.04	1	0.16129032	2	0.00577584
9638	GO:0016539	intron-mediated protein splic	0.04	1	0.16129032	2	0.00577584
9686	GO:0016602	CCAAT-binding factor comp	0.04	1	0.16129032	2	0.00577584
12948	GO:0030417	nicotianamine metabolic pro	0.04	1	0.16129032	2	0.00577584
12949	GO:0030418	nicotianamine biosynthetic p	0.04	1	0.16129032	2	0.00577584
13372	GO:0030908	protein splicing	0.04	1	0.16129032	2	0.00577584
18706	GO:0042367	thiamine diphosphate metab	0.04	1	0.16129032	2	0.00577584
22759	GO:0047268	galactinol-raffinose galactos	0.04	1	0.16129032	2	0.00577584
25888	GO:0051604	protein maturation	0.04	1	0.16129032	2	0.00577584
30709	GO:0072350	tricarboxylic acid metabolic p	0.04	1	0.16129032	2	0.00577584
30710	GO:0072351	tricarboxylic acid biosynthetic	0.04	1	0.16129032	2	0.00577584
143	GO:0000179 GO:0043790	rRNA (adenine-N6,N6)-dim	0.04	1	0.16129032	2	0.00577584
3148	GO:0004489 GO:0008702	methylene-tetrahydrofolate re	0.04	1	0.16129032	2	0.00577584
18738	GO:0042389	omega-3 fatty acid desatura	0.04	2	0.32258064	17	0.049094636
23522	GO:0048046	apoplast	0.04	4	0.6451613	70	0.20215438
10899	GO:0018858	benzoate-CoA ligase activity	0.04	2	0.32258064	18	0.051982556
2674	GO:0003824	catalytic activity	0.04	213	34.35484	10750	31.045137
9832	GO:0016782	transferase activity, transferr	0.04	4	0.6451613	74	0.21370606
18750	GO:0042401	cellular biogenic amine biosy	0.04	2	0.32258064	19	0.054870475
25510	GO:0051213	dioxigenase activity	0.05	4	0.6451613	75	0.21659398
3124	GO:0004462	lactoylglutathione lyase activ	0.05	2	0.32258064	20	0.0577584
9877	GO:0016838	carbon-oxygen lyase activity	0.05	4	0.6451613	77	0.22236982



9486	GO:0016298	lipase activity	0.05	7	1.1290323	185	0.53426516
3853	GO:0005463	UDP-N-acetylgalactosamine	0.05	1	0.16129032	3	0.00866376
9058	GO:0015789	UDP-N-acetylgalactosamine	0.05	1	0.16129032	3	0.00866376
13651	GO:0031219	levanase activity	0.05	1	0.16129032	3	0.00866376
21936	GO:0046409	p-coumarate 3-hydroxylase a	0.05	1	0.16129032	3	0.00866376
9600	GO:0016491	oxidoreductase activity	0.06	40	6.451613	1724	4.9787736
24858	GO:0050551	myrcene synthase activity	0.06	2	0.32258064	22	0.06353424
9783	GO:0016722	oxidoreductase activity, oxid	0.06	3	0.48387095	50	0.14439599
12794	GO:0030234	enzyme regulator activity	0.06	12	1.9354838	403	1.1638317
9779	GO:0016717	oxidoreductase activity, actin	0.07	2	0.32258064	24	0.06931008
13657	GO:0031225	anchored to membrane	0.07	2	0.32258064	24	0.06931008
25578	GO:0051287 GO:0051288	NAD binding	0.07	2	0.32258064	24	0.06931008
3399	GO:0004788	thiamine diphosphokinase ac	0.07	1	0.16129032	4	0.011551679
3834	GO:0005395	eye pigment precursor trans	0.07	1	0.16129032	4	0.011551679
5826	GO:0008307	structural constituent of musc	0.07	1	0.16129032	4	0.011551679
5896	GO:0008401	retinoic acid 4-hydroxylase a	0.07	1	0.16129032	4	0.011551679
5934	GO:0008446	GDP-mannose 4,6-dehydrat	0.07	1	0.16129032	4	0.011551679
6293	GO:0008898	homocysteine S-methyltrans	0.07	1	0.16129032	4	0.011551679
7511	GO:0010285 GO:0043742	L,L-diaminopimelate aminotr	0.07	1	0.16129032	4	0.011551679
8130	GO:0010921	regulation of phosphatase ac	0.07	1	0.16129032	4	0.011551679
8598	GO:0015188	L-isoleucine transmembran	0.07	1	0.16129032	4	0.011551679
8877	GO:0015578 GO:0015589	mannose transmembrane tra	0.07	1	0.16129032	4	0.011551679
9030	GO:0015761	mannose transport	0.07	1	0.16129032	4	0.011551679
9072	GO:0015803	branched-chain aliphatic am	0.07	1	0.16129032	4	0.011551679
9086	GO:0015818	isoleucine transport	0.07	1	0.16129032	4	0.011551679
16391	GO:0034007	S-linalool synthase activity	0.07	1	0.16129032	4	0.011551679
17669	GO:0035303	regulation of dephosphorylat	0.07	1	0.16129032	4	0.011551679
19932	GO:0043666	regulation of phosphoprotein	0.07	1	0.16129032	4	0.011551679
24433	GO:0050113	inositol oxygenase activity	0.07	1	0.16129032	4	0.011551679
2689	GO:0003839	gamma-glutamylcyclotransfe	0.07	1	0.16129032	4	0.011551679
2753	GO:0003919	FMN adenyltransferase ac	0.07	1	0.16129032	4	0.011551679
3291	GO:0004657	proline dehydrogenase activ	0.07	1	0.16129032	4	0.011551679
9482	GO:0016291 GO:0008778 GO	acyl-CoA thioesterase activi	0.07	2	0.32258064	25	0.072197996
17147	GO:0034768	(E)-beta-ocimene synthase a	0.08	2	0.32258064	26	0.075085916
7557	GO:0010333	terpene synthase activity	0.08	3	0.48387095	57	0.16461143
18956	GO:0042626	ATPase activity, coupled to t	0.09	7	1.1290323	211	0.6093511
22765	GO:0047274	galactinol-sucrose galactosyl	0.09	1	0.16129032	5	0.0144396
3035	GO:0004351	glutamate decarboxylase ac	0.09	1	0.16129032	5	0.0144396
9861	GO:0016820	hydrolase activity, acting on	0.09	7	1.1290323	212	0.612239
30700	GO:0072341	modified amino acid binding	0.09	3	0.48387095	59	0.17038727
14811	GO:0032403	protein complex binding	0.09	3	0.48387095	60	0.17327519
25095	GO:0050790	regulation of catalytic activity	0.09	13	2.096774	480	1.3862015
28366	GO:0065009	regulation of molecular funct	0.10	13	2.096774	484	1.3977532
6216	GO:0008810	cellulase activity	0.10	2	0.32258064	30	0.086637594
9785	GO:0016724	oxidoreductase activity, oxid	0.10	2	0.32258064	30	0.086637594
2870	GO:0004064	arylesterase activity	0.10	2	0.32258064	30	0.086637594
3009	GO:0004322	ferroxidase activity	0.10	2	0.32258064	30	0.086637594
4953	GO:0006868 GO:0015815	glutamine transport	0.10	1	0.16129032	6	0.01732752
6000	GO:0008531	riboflavin kinase activity	0.10	1	0.16129032	6	0.01732752
6317	GO:0008923	lysine decarboxylase activity	0.10	1	0.16129032	6	0.01732752
8505	GO:0015089	high affinity copper ion trans	0.10	1	0.16129032	6	0.01732752
8596	GO:0015186	L-glutamine transmembran	0.10	1	0.16129032	6	0.01732752
11899	GO:0019992	diacylglycerol binding	0.10	1	0.16129032	6	0.01732752
19761	GO:0043495	protein anchor	0.10	1	0.16129032	6	0.01732752
31395	GO:0080018	anthocyanin 5-O-glucosyltra	0.10	1	0.16129032	6	0.01732752
5	GO:0000007	low-affinity zinc ion transme	0.10	1	0.16129032	6	0.01732752
2713	GO:0003863	3-methyl-2-oxobutanoate de	0.10	1	0.16129032	6	0.01732752
2811	GO:0003995 GO:0019109	acyl-CoA dehydrogenase ac	0.10	1	0.16129032	6	0.01732752
19590	GO:0043295	glutathione binding	0.11	2	0.32258064	31	0.08952551
3717	GO:0005199	structural constituent of cell v	0.11	2	0.32258064	32	0.09241343
6942	GO:0009674	potassium:sodium symporte	0.11	2	0.32258064	32	0.09241343
12522	GO:0022820	potassium ion symporter act	0.11	2	0.32258064	32	0.09241343
4705	GO:0006576	cellular biogenic amine met	0.12	2	0.32258064	33	0.09530135
9812	GO:0016758	transferase activity, transferr	0.12	13	2.096774	501	1.4468478
3443	GO:0004834	tryptophan synthase activity	0.12	1	0.16129032	7	0.020215439
21776	GO:0046219	indolalkylamine biosynthetic	0.12	1	0.16129032	7	0.020215439
128	GO:0000162 GO:0009096	tryptophan biosynthetic proc	0.12	1	0.16129032	7	0.020215439
2945	GO:0004143	diacylglycerol kinase activity	0.12	1	0.16129032	7	0.020215439
3255	GO:0004615 GO:0008971	phosphomannomutase activ	0.12	1	0.16129032	7	0.020215439
11931	GO:0020037	heme binding	0.12	14	2.2580645	550	1.5883559
3873	GO:0005507	copper ion binding	0.12	5	0.8064516	146	0.42163628
22375	GO:0046872	metal ion binding	0.12	62	10	2985	8.6204405
4320	GO:0006082	organic acid metabolic proc	0.13	10	1.6129032	369	1.0656425
11716	GO:0019752	carboxylic acid metabolic pro	0.13	10	1.6129032	369	1.0656425
19707	GO:0043436	oxoacid metabolic process	0.13	10	1.6129032	369	1.0656425
9480	GO:0016289	CoA hydrolase activity	0.13	2	0.32258064	35	0.10107719
24968	GO:0050662	coenzyme binding	0.13	6	0.9677419	191	0.5515927
19470	GO:0043167	ion binding	0.13	62	10	2997	8.655096
19472	GO:0043169	cation binding	0.13	62	10	2997	8.655096
19758	GO:0043492	ATPase activity, coupled to r	0.13	7	1.1290323	235	0.67866117
3402	GO:0004791	thioredoxin-disulfide reducta	0.13	1	0.16129032	8	0.023103358
6378	GO:0008999	ribosomal-protein-alanine N-	0.13	1	0.16129032	8	0.023103358
4	GO:0000006	high affinity zinc uptake trans	0.13	1	0.16129032	8	0.023103358
3872	GO:0005506	iron ion binding	0.14	14	2.2580645	563	1.6258988
18541	GO:0042180	cellular ketone metabolic pro	0.14	10	1.6129032	375	1.0829699
9767	GO:0016705	oxidoreductase activity, actin	0.14	9	1.451613	329	0.95012563
3306	GO:0004674 GO:0004695 GO	protein serine/threonine kin	0.15	24	3.8709676	1062	3.0669708
3694	GO:0005160	transforming growth factor b	0.15	1	0.16129032	9	0.025991278
4697	GO:0006568	tryptophan metabolic proces	0.15	1	0.16129032	9	0.025991278
4715	GO:0006586	indolalkylamine metabolic pro	0.15	1	0.16129032	9	0.025991278
7506	GO:0010279	indole-3-acetic acid amido sy	0.15	1	0.16129032	9	0.025991278
13224	GO:0030755	quercetin 3-O-methyltransfer	0.15	1	0.16129032	9	0.025991278
19254	GO:0042937	tripeptide transporter activity	0.15	1	0.16129032	9	0.025991278
19342	GO:0043027	caspace inhibitor activity	0.15	1	0.16129032	9	0.025991278
19343	GO:0043028	caspace regulator activity	0.15	1	0.16129032	9	0.025991278
19458	GO:0043154 GO:0001719	negative regulation of caspa	0.15	1	0.16129032	9	0.025991278
19579	GO:0043281 GO:0043026	regulation of caspace activi	0.15	1	0.16129032	9	0.025991278
9874	GO:0016835	carbon-oxygen lyase activity	0.16	6	0.9677419	202	0.5833598
5891	GO:0008395 GO:0008394	steroid hydroxylase activity	0.16	2	0.32258064	40	0.1155168
24966	GO:0050660	flavin adenine dinucleotide b	0.16	4	6.451613	118	0.34077454
5716	GO:0008172	S-methyltransferase activity	0.17	1	0.16129032	10	0.0288792
7175	GO:0009924	octadecanal decarboxylase	0.17	1	0.16129032	10	0.0288792
9741	GO:0016688 GO:0016654	oxidoreductase activity, actin	0.17	1	0.16129032	10	0.0288792
9828	GO:0016778	diphosphotransferase activity	0.17	1	0.16129032	10	0.0288792
15183	GO:0032781	positive regulation of ATPase	0.17	1	0.16129032	10	0.0288792
19728	GO:0043462	regulation of ATPase activity	0.17	1	0.16129032	10	0.0288792
27563	GO:0060590	ATPase regulator activity	0.17	1	0.16129032	10	0.0288792
30135	GO:0071771	aldehyde decarboxylase acti	0.17	1	0.16129032	10	0.0288792
989	GO:0001671	ATPase activator activity	0.17	1	0.16129032	10	0.0288792
2797	GO:0003979	UDP-glucose 6-dehydrogen	0.17	1	0.16129032	10	0.0288792
4954	GO:0006869	lipid transport	0.17	6	0.9677419	208	0.6006873
8085	GO:0010876	lipid localization	0.17	6	0.9677419	208	0.6006873
9682	GO:0016597	amino acid binding	0.17	3	0.48387095	80	0.2310336
19479	GO:0043176	amine binding	0.17	3	0.48387095	80	0.2310336
13884	GO:0031461	cullin-RING ubiquitin liqase c	0.17	2	0.32258064	42	0.121292636
9795	GO:0016740	transferase activity	0.18	75	12.096774	3764	10.870131
3260	GO:0004620	phospholipase activity	0.18	4	6.451613	123	0.35521415
8589	GO:0015179	L-amino acid transmembran	0.18	2	0.32258064	43	0.124180555
9076	GO:0015807	L-amino acid transport	0.18	2	0.32258064	43	0.124180555
16183	GO:0033799	myricetin 3'-O-methyltransfe	0.18	1	0.16129032	11	0.03176712
18781	GO:0042435	indole-containing compound	0.18	1	0.16129032	11	0.03176712

19256	GO:0042939	tripeptide transport	0.18	1	0.16129032	11	0.03176712
22376	GO:0046873	metal ion transmembrane tra	0.18	6	0.9677419	213	0.6151269
22409	GO:0046906	tetrapyrrole binding	0.19	14	2.2580645	596	1.7212002
8749	GO:0015399	primary active transmembran	0.19	7	1.1290323	260	0.75085914
8753	GO:0015405	P-P-bond-hydrolysis-driven t	0.19	7	1.1290323	260	0.75085914
4912	GO:0006813 GO:0015458	potassium ion transport	0.19	3	0.48387095	84	0.24258527
30168	GO:0071804	cellular potassium ion transp	0.19	3	0.48387095	84	0.24258527
30169	GO:0071805	potassium ion transmembran	0.19	3	0.48387095	84	0.24258527
3386	GO:0004773	sterol-sulfatase activity	0.19	1	0.16129032	12	0.03465504
4506	GO:0006313 GO:0006317	transposition, DNA-mediated	0.19	1	0.16129032	12	0.03465504
5965	GO:0008484	sulfuric ester hydrolase activ	0.19	1	0.16129032	12	0.03465504
9775	GO:0016713	oxidoreductase activity, acti	0.19	1	0.16129032	12	0.03465504
10743	GO:0018685 GO:0008393	alkane 1-monoxygenase ac	0.19	1	0.16129032	12	0.03465504
14604	GO:0032196	transposition	0.19	1	0.16129032	12	0.03465504
19047	GO:0042723	thiamine-containing compou	0.19	1	0.16129032	12	0.03465504
19048	GO:0042724	thiamine-containing compou	0.19	1	0.16129032	12	0.03465504
31380	GO:0080002	UDP-glucose:4-aminobenzo	0.19	1	0.16129032	12	0.03465504
3156	GO:0004497	monoxygenase activity	0.20	5	0.8064516	172	0.49672222
3200	GO:0004553 GO:0016800	hydrolase activity, hydrolyzi	0.20	8	1.2903225	312	0.90103096
30204	GO:0071840	cellular component organiza	0.20	9	1.451613	362	1.045247
8497	GO:0015079 GO:0022817	potassium ion transmembran	0.21	2	0.32258064	47	0.13573223
119	GO:0000151	ubiquitin ligase complex	0.21	3	0.48387095	88	0.25413695
7551	GO:0010327	acetyl CoA:(Z)-3-hexen-1-ol	0.21	1	0.16129032	13	0.037542958
8149	GO:0010941	regulation of cell death	0.21	1	0.16129032	13	0.037542958
8578	GO:0015165	pyrimidine nucleotide-sugar t	0.21	1	0.16129032	13	0.037542958
9050	GO:0015781	pyrimidine nucleotide-sugar t	0.21	1	0.16129032	13	0.037542958
18777	GO:0042430 GO:0042434	indole-containing compound	0.21	1	0.16129032	13	0.037542958
19298	GO:0042981	regulation of apoptosis	0.21	1	0.16129032	13	0.037542958
19381	GO:0043067 GO:0043070	regulation of programmed ce	0.21	1	0.16129032	13	0.037542958
28930	GO:0070566	adenylyltransferase activity	0.21	2	0.32258064	48	0.13862015
9725	GO:0016645	oxidoreductase activity, acti	0.22	49	0.32258064	49	0.14150807
6075	GO:0008649	rRNA methyltransferase acti	0.22	1	0.16129032	14	0.040430877
31408	GO:0080031	methyl salicylate esterase ac	0.22	1	0.16129032	14	0.040430877
12608	GO:0030001	metal ion transport	0.23	9	1.451613	374	1.080082
9975	GO:0016998	cell wall macromolecule cata	0.23	2	0.32258064	51	0.14728391
3293	GO:0004659	prenyltransferase activity	0.23	2	0.32258064	51	0.14728391
23515	GO:0048037	cofactor binding	0.23	8	1.2903225	327	0.94434977
7520	GO:0010294	abscisic acid glucosyltransfe	0.24	1	0.16129032	15	0.043318797
11733	GO:0019773	proteasome core complex, a	0.24	1	0.16129032	15	0.043318797
2868	GO:0004062	aryl sulfotransferase activity	0.24	1	0.16129032	15	0.043318797
3209	GO:0004564	beta-fructofuranosylase activ	0.24	1	0.16129032	15	0.043318797
20287	GO:0044036	cell wall macromolecule met	0.24	2	0.32258064	52	0.15017183
30066	GO:0071702	organic substance transport	0.24	12	1.9354838	529	1.5277096
3742	GO:0005242	inward rectifier potassium ch	0.25	1	0.16129032	16	0.046206716
13624	GO:0031167	rRNA methylation	0.25	1	0.16129032	16	0.046206716
31396	GO:0080019	fatty-acyl-CoA reductase (alk	0.25	1	0.16129032	16	0.046206716
30205	GO:0071841	cellular component organiza	0.25	7	1.1290323	285	0.8230572
13829	GO:0031406	carboxylic acid binding	0.26	3	0.48387095	98	0.28301615
2986	GO:0004252	serine-type endopeptidase a	0.26	4	0.6451613	144	0.41586044
9533	GO:0016405	CoA-ligase activity	0.26	2	0.32258064	55	0.15883559
11776	GO:0019825	oxygen binding	0.26	9	1.451613	389	1.1234008
30887	GO:0072531	pyrimidine-containing compo	0.26	1	0.16129032	17	0.049094636
31498	GO:0080123	thiamine-adenosine synthetase	0.26	1	0.16129032	17	0.049094636
9883	GO:0016846	carbon-sulfur lyase activity	0.27	2	0.32258064	56	0.16172351
9910	GO:0016878	acid-thiol lyase activity	0.27	2	0.32258064	57	0.16461143
9906	GO:0016874	lyase activity	0.28	13	2.096774	597	1.7240882
3832	GO:0005388	calcium-transporting ATPase	0.28	1	0.16129032	18	0.051982556
5776	GO:0008252	nucleotidase activity	0.28	1	0.16129032	18	0.051982556
9726	GO:0016646	oxidoreductase activity, acti	0.28	1	0.16129032	18	0.051982556
12887	GO:0030332	cyclin binding	0.28	1	0.16129032	18	0.051982556
16595	GO:0034212	peptide N-acetyltransferase	0.28	1	0.16129032	18	0.051982556
28368	GO:0070001	aspartic-type peptidase activ	0.28	1	0.16129032	18	0.051982556
2981	GO:0004190	aspartic-type endopeptidase	0.28	1	0.16129032	18	0.051982556
3239	GO:0004596	peptide alpha-N-acetyltransf	0.28	1	0.16129032	18	0.051982556
8558	GO:0015145	monosaccharide transmembr	0.28	2	0.32258064	58	0.16749935
9018	GO:0015749	monosaccharide transport	0.28	2	0.32258064	58	0.16749935
9800	GO:0016746	transferase activity, transferr	0.28	11	1.7741935	498	1.438184
3304	GO:0004672 GO:0050222	protein kinase activity	0.28	27	4.354839	1333	3.8495972
19253	GO:0042936	dipeptide transporter activity	0.29	3	0.48387095	105	0.3032316
19255	GO:0042938	dipeptide transport	0.29	3	0.48387095	105	0.3032316
3799	GO:0005338 GO:0005339	nucleotide-sugar transmembr	0.29	1	0.16129032	19	0.054870475
9049	GO:0015780	nucleotide-sugar transport	0.29	1	0.16129032	19	0.054870475
9809	GO:0016755	transferase activity, transferr	0.29	1	0.16129032	19	0.054870475
11202	GO:0019199	transmembrane receptor pro	0.29	11	1.7741935	504	1.4555116
8526	GO:0015112	nitrate transmembrane trans	0.30	2	0.32258064	61	0.1761631
8975	GO:0015706 GO:0006872	nitrate transport	0.30	2	0.32258064	61	0.1761631
9801	GO:0016747	transferase activity, transferr	0.30	10	1.6129032	456	1.3168914
3798	GO:0005337	nucleoside transmembrane t	0.30	1	0.16129032	20	0.0577584
6201	GO:0008794	arsenate reductase (glutared	0.30	1	0.16129032	20	0.0577584
9122	GO:0015858	nucleoside transport	0.30	1	0.16129032	20	0.0577584
9707	GO:0016624	oxidoreductase activity, acti	0.30	1	0.16129032	20	0.0577584
9784	GO:0016723	oxidoreductase activity, oxid	0.30	1	0.16129032	20	0.0577584
13086	GO:0030611	arsenate reductase activity	0.30	1	0.16129032	20	0.0577584
13088	GO:0030613	oxidoreductase activity, acti	0.30	1	0.16129032	20	0.0577584
13089	GO:0030614	oxidoreductase activity, acti	0.30	1	0.16129032	20	0.0577584
122	GO:0000154 GO:0016548	rRNA modification	0.30	1	0.16129032	20	0.0577584
225	GO:0000293	ferric-chelate reductase activ	0.30	1	0.16129032	20	0.0577584
6018	GO:0008559 GO:0005226 GO	xenobiotic-transporting ATPa	0.31	2	0.32258064	62	0.17905103
19225	GO:0042908	xenobiotic transport	0.31	2	0.32258064	62	0.17905103
19227	GO:0042910	xenobiotic transporter activity	0.31	2	0.32258064	62	0.17905103
3474	GO:0004869 GO:0004870	cysteine-type endopeptidase	0.32	1	0.16129032	21	0.060646318
5878	GO:0008378	galactosyltransferase activity	0.32	1	0.16129032	21	0.060646318
9902	GO:0016868 GO:0016777	intramolecular transferase ac	0.32	1	0.16129032	21	0.060646318
23518	GO:0048040	UDP-glucuronate decarboxy	0.32	1	0.16129032	21	0.060646318
22416	GO:0046915	transition metal ion transmem	0.32	2	0.32258064	64	0.18482687
9838	GO:0016790	thioester hydrolase activity	0.32	2	0.32258064	65	0.18771479
9285	GO:0016043	cellular component organiza	0.33	6	0.9677419	261	0.7537471
3490	GO:0004888 GO:0004926	transmembrane receptor act	0.33	12	1.9354838	571	1.6490022
3828	GO:0005375 GO:0005378 GO	copper ion transmembrane t	0.33	1	0.16129032	22	0.06353424
3831	GO:0005385	zinc ion transmembrane tran	0.33	1	0.16129032	22	0.06353424
4920	GO:0006825	copper ion transport	0.33	1	0.16129032	22	0.06353424
4924	GO:0006829	zinc ion transport	0.33	1	0.16129032	22	0.06353424
10032	GO:0017075	syntaxin-1 binding	0.33	1	0.16129032	22	0.06353424
13038	GO:0030551	cyclic nucleotide binding	0.33	1	0.16129032	22	0.06353424
17800	GO:0035434	copper ion transmembrane t	0.33	1	0.16129032	22	0.06353424
29941	GO:0071577	zinc ion transmembrane tran	0.33	1	0.16129032	22	0.06353424
9811	GO:0016757 GO:0016932	transferase activity, transferr	0.33	15	2.419355	729	2.1052935
11829	GO:0019900	kinase binding	0.33	2	0.32258064	66	0.1906027
9837	GO:0016788	hydrolase activity, acting on	0.34	30	4.83871	1534	4.430069
3662	GO:0005126	cytokine receptor binding	0.34	1	0.16129032	23	0.06642216
22753	GO:0047262 GO:0050375	polygalacturonate 4-alpha-ga	0.34	1	0.16129032	23	0.06642216
2633	GO:0003684	damaged DNA binding	0.34	2	0.16129032	23	0.06642216
32	GO:0000041	transition metal ion transport	0.34	2	0.32258064	68	0.19637854
9836	GO:0016787	hydrolase activity	0.35	70	11.290322	3723	10.751725
8559	GO:0015146	pentose transmembrane tran	0.35	1	0.16129032	24	0.06931008
8561	GO:0015148	D-xylose transmembrane tra	0.35	1	0.16129032	24	0.06931008
8829	GO:0015519	D-xylose:hydrogen symporte	0.35	1	0.16129032	24	0.06931008
9019	GO:0015750	pentose transport	0.35	1	0.16129032	24	0.06931008
9022	GO:0015753	D-xylose transport	0.35	1	0.16129032	24	0.06931008
31407	GO:0080030	methyl indole-3-acetate este	0.35	1	0.16129032	24	0.06931008
3262	GO:0004622 GO:0045126	lysophospholipase activity	0.35	1	0.16129032	24	0.06931008
17617	GO:0035251	UDP-glucosyltransferase act	0.35	5	0.8064516	218	0.62956655



9824	GO:016773	phosphotransferase activity	0.35	29	4.677419	1493	4.311664
8584	GO:0015171 GO:0015359	amino acid transmembrane transport	0.35	3	0.48387095	118	0.34077454
2521	GO:0003333	amino acid transmembrane transport	0.35	3	0.48387095	118	0.34077454
22049	GO:0046527	glucosyltransferase activity	0.35	6	0.9677419	270	0.77973837
10103	GO:0017171	serine hydrolase activity	0.36	5	0.8064516	220	0.63534236
4503	GO:0006310	DNA recombination	0.36	1	0.16129032	25	0.072197996
21145	GO:0045543	gibberellin 2-beta-dioxygenase activity	0.36	1	0.16129032	25	0.072197996
31393	GO:0080016	(-)-E-beta-caryophyllene synthase activity	0.36	1	0.16129032	25	0.072197996
31394	GO:0080017	alpha-humulene synthase activity	0.36	1	0.16129032	25	0.072197996
31493	GO:0080118	brassinosteroid sulfotransferase activity	0.36	1	0.16129032	25	0.072197996
8675	GO:0015293	symporter activity	0.37	4	0.6451613	173	0.49961013
9421	GO:0016208	AMP binding	0.37	1	0.16129032	26	0.075085916
9897	GO:0016862	intramolecular oxidoreductase activity	0.37	1	0.16129032	26	0.075085916
9899	GO:0016864	intramolecular oxidoreductase activity	0.37	1	0.16129032	26	0.075085916
25135	GO:0050832 GO:0042831	defense response to fungus	0.37	1	0.16129032	26	0.075085916
2665	GO:0003756	protein disulfide isomerase activity	0.37	1	0.16129032	26	0.075085916
3210	GO:0004565	beta-galactosidase activity	0.37	1	0.16129032	26	0.075085916
4951	GO:0006865 GO:0006866	amino acid transport	0.38	3	0.48387095	123	0.35521415
12572	GO:0022890 GO:0015082	inorganic cation transmembrane transport	0.38	7	1.1290323	332	0.9587894
9541	GO:0016413	O-acetyltransferase activity	0.39	1	0.16129032	27	0.077973835
3761	GO:0005275 GO:0005279	amine transmembrane transport	0.39	3	0.48387095	126	0.3638779
3332	GO:0004711	ribosomal protein S6 kinase activity	0.40	1	0.16129032	28	0.080861755
6940	GO:0009672	auxin:hydrogen symporter activity	0.40	1	0.16129032	28	0.080861755
13634	GO:0031177	phosphopantetheine binding	0.40	1	0.16129032	28	0.080861755
3284	GO:0004650	polygalacturonase activity	0.40	1	0.16129032	28	0.080861755
9913	GO:0016881	acid-amino acid ligase activity	0.40	8	1.2903225	391	1.1291766
6166	GO:0008757	S-adenosylmethionine-dependent methyltransferase activity	0.40	4	0.6451613	180	0.5198256
7558	GO:0010334	sesquiterpene synthase activity	0.41	1	0.16129032	29	0.083749674
11834	GO:0019905	synaptotagmin binding	0.41	1	0.16129032	29	0.083749674
20887	GO:0045263	proton-transporting ATP synthase activity	0.41	1	0.16129032	29	0.083749674
30865	GO:0072509	divalent inorganic cation transport	0.41	2	0.32258064	78	0.22525774
3975	GO:0005667	transcription factor complex	0.42	1	0.16129032	30	0.086637594
2774	GO:0003950	NAD+ ADP-ribosyltransferase activity	0.42	1	0.16129032	30	0.086637594
9875	GO:0016836	hydro-lyase activity	0.42	2	0.32258064	80	0.2310336
4612	GO:0006468	protein phosphorylation	0.42	41	6.612903	2205	6.367863
3476	GO:0004872 GO:0019041	receptor activity	0.43	13	2.096774	672	1.9406822
7222	GO:0009975	cyclase activity	0.43	1	0.16129032	31	0.08952551
29202	GO:0070838	divalent metal ion transport	0.43	2	0.32258064	82	0.23680943
9103	GO:0015837	amine transport	0.44	3	0.48387095	135	0.38986918
3787	GO:0005319	lipid transporter activity	0.44	2	0.32258064	83	0.23969735
4108	GO:0005839 GO:0000503	proteasome core complex	0.44	1	0.16129032	32	0.09241343
4481	GO:0006284	base-excision repair	0.44	1	0.16129032	32	0.09241343
4510	GO:0006323	DNA packaging	0.44	1	0.16129032	32	0.09241343
4514	GO:0006334	nucleosome assembly	0.44	1	0.16129032	32	0.09241343
12833	GO:0030275	LRR domain binding	0.44	1	0.16129032	32	0.09241343
13920	GO:0031497	chromatin assembly	0.44	1	0.16129032	32	0.09241343
17107	GO:0034728	nucleosome organization	0.44	1	0.16129032	32	0.09241343
28361	GO:0065004	protein-DNA complex assembly	0.44	1	0.16129032	32	0.09241343
29467	GO:0071103	DNA conformation change	0.44	1	0.16129032	32	0.09241343
30188	GO:0071824	protein-DNA complex subunit	0.44	1	0.16129032	32	0.09241343
3265	GO:0004630	phospholipase D activity	0.44	1	0.16129032	32	0.09241343
3475	GO:0004871 GO:0005062	signal transducer activity	0.44	15	2.419355	787	2.2727928
12516	GO:0022804	active transmembrane transport	0.44	15	2.419355	787	2.2727928
27063	GO:0060089	molecular transducer activity	0.44	15	2.419355	787	2.2727928
3801	GO:0005342	organic acid transmembrane transport	0.44	3	0.48387095	136	0.3927571
22444	GO:0046943	carboxylic acid transmembrane transport	0.44	3	0.48387095	136	0.3927571
30867	GO:0072511	divalent inorganic cation transport	0.45	2	0.32258064	84	0.24258527
4493	GO:0006298 GO:0006300	mismatch repair	0.45	1	0.16129032	33	0.09530135
11222	GO:0019220	regulation of phosphate metabolism	0.45	2	0.32258064	85	0.24547319
25471	GO:0051174	regulation of phosphorus metabolism	0.45	2	0.32258064	85	0.24547319
31895	GO:0090304	nucleic acid metabolic process	0.45	43	6.935484	2340	6.7577324
4942	GO:0006855	drug transmembrane transport	0.45	3	0.48387095	139	0.40142086
8607	GO:0015197 GO:0015637	peptide transporter activity	0.45	3	0.48387095	139	0.40142086
8608	GO:0015198	oligopeptide transporter activity	0.45	3	0.48387095	139	0.40142086
8642	GO:0015238 GO:0015239	drug transmembrane transport	0.45	3	0.48387095	139	0.40142086
9154	GO:0015893	drug transport	0.45	3	0.48387095	139	0.40142086
18832	GO:0042493 GO:0017035	response to drug	0.45	3	0.48387095	139	0.40142086
2897	GO:0004091 GO:0004302	carboxylesterase activity	0.46	4	0.6451613	194	0.5602564
3749	GO:0005249	voltage-gated potassium channel activity	0.46	1	0.16129032	34	0.09818927
5717	GO:0008173	RNA methyltransferase activity	0.46	1	0.16129032	34	0.09818927
6072	GO:0008645	hexose transport	0.46	1	0.16129032	34	0.09818927
8562	GO:0015149	hexose transmembrane transport	0.46	1	0.16129032	34	0.09818927
11831	GO:0019902	phosphatase binding	0.46	1	0.16129032	34	0.09818927
11832	GO:0019903	protein phosphatase binding	0.46	1	0.16129032	34	0.09818927
17794	GO:0035428	hexose transmembrane transport	0.46	1	0.16129032	34	0.09818927
4944	GO:0006857	oligopeptide transport	0.46	3	0.48387095	141	0.4071967
9099	GO:0015833	peptide transport	0.46	3	0.48387095	141	0.4071967
4538	GO:0006364 GO:0006365	rRNA processing	0.47	1	0.16129032	35	0.10107719
6355	GO:0008970	phospholipase A1 activity	0.47	1	0.16129032	35	0.10107719
9310	GO:0016072	rRNA metabolic process	0.47	1	0.16129032	35	0.10107719
23199	GO:0047714	galactolipase activity	0.47	1	0.16129032	35	0.10107719
8557	GO:0015144	carbohydrate transmembrane transport	0.47	3	0.48387095	143	0.41297254
16602	GO:0034219	carbohydrate transmembrane transport	0.47	3	0.48387095	143	0.41297254
4513	GO:0006333	chromatin assembly or disassembly	0.48	1	0.16129032	36	0.10396511
9185	GO:0015925	galactosidase activity	0.48	1	0.16129032	36	0.10396511
3758	GO:0005267	potassium channel activity	0.49	1	0.16129032	37	0.10685303
8934	GO:0015662	ATPase activity, coupled to transport	0.49	1	0.16129032	37	0.10685303
30069	GO:0071705	nitrogen compound transport	0.49	4	0.6451613	202	0.5833598
6071	GO:0008643 GO:0006810	carbohydrate transport	0.49	3	0.48387095	147	0.42452422
5840	GO:0008324	cation transmembrane transport	0.50	10	1.6129032	538	1.5537009
6893	GO:0009620 GO:0009621	response to fungus	0.50	1	0.16129032	38	0.10974095
8501	GO:0015085	calcium ion transmembrane transport	0.50	1	0.16129032	38	0.10974095
8588	GO:0015175	neutral amino acid transmembrane transport	0.50	1	0.16129032	38	0.10974095
9073	GO:0015804	neutral amino acid transport	0.50	1	0.16129032	38	0.10974095
9637	GO:0016538 GO:0003751	cyclin-dependent protein kinase activity	0.50	1	0.16129032	38	0.10974095
12538	GO:0022843	voltage-gated cation channel activity	0.50	1	0.16129032	38	0.10974095
117	GO:0000149	SNARE binding	0.50	1	0.16129032	38	0.10974095
20336	GO:0044085	cellular component biogenesis	0.50	2	0.32258064	93	0.26857653
868	GO:0001510	RNA methylation	0.51	1	0.16129032	39	0.11262887
18633	GO:0042277	peptide binding	0.51	2	0.32258064	95	0.27435237
5732	GO:0008194	UDP-glycosyltransferase activity	0.52	6	0.9677419	322	0.9299102
2628	GO:0003677	DNA binding	0.52	22	3.548387	1224	3.548414
4911	GO:0006812 GO:0006819	cation transport	0.52	12	1.9354838	662	1.9118029
3449	GO:0004842 GO:0004840	ubiquitin-protein ligase activity	0.53	6	0.9677419	326	0.94146186
8943	GO:0015672	monovalent inorganic cation transport	0.53	7	1.1290323	383	1.1060733
9114	GO:0015849	organic acid transport	0.53	3	0.48387095	156	0.45051548
22443	GO:0046942	carboxylic acid transport	0.53	3	0.48387095	156	0.45051548
4874	GO:0006767	water-soluble vitamin metabolic process	0.53	1	0.16129032	42	0.121292636
18713	GO:0042364	water-soluble vitamin biosynthesis	0.53	1	0.16129032	42	0.121292636
5766	GO:0008236	serine-type peptidase activity	0.54	4	0.6451613	214	0.6180149
8495	GO:0015077	monovalent inorganic cation transport	0.54	4	0.6451613	214	0.6180149
9654	GO:0016567	protein ubiquitination	0.55	6	0.9677419	332	0.9587894
14854	GO:0032446	protein modification by small molecule	0.55	6	0.9677419	332	0.9587894
29011	GO:0070647	protein modification by small molecule	0.55	6	0.9677419	332	0.9587894
4873	GO:0006766	vitamin metabolic process	0.55	1	0.16129032	44	0.12706847
4914	GO:0006816	calcium ion transport	0.55	1	0.16129032	44	0.12706847
6477	GO:0009110	vitamin biosynthetic process	0.55	1	0.16129032	44	0.12706847
20522	GO:0044272	sulfur compound biosynthetic process	0.55	1	0.16129032	44	0.12706847
28952	GO:0070588	calcium ion transmembrane transport	0.55	1	0.16129032	44	0.12706847
409	GO:0000502	proteasome complex	0.55	1	0.16129032	44	0.12706847
5195	GO:0007165 GO:0023033	signal transduction	0.55	17	2.7419355	961	2.775291
12602	GO:0023052 GO:0023046	signaling	0.55	17	2.7419355	961	2.775291

8666	GO:0015276	ligand-gated ion channel acti	0.56	1	0.16129032	45	0.1299564
11780	GO:0019829	cation-transporting ATPase a	0.56	1	0.16129032	45	0.1299564
12530	GO:0022834	ligand-gated channel activity	0.56	1	0.16129032	45	0.1299564
17001	GO:0034622	cellular macromolecular corr	0.56	1	0.16129032	45	0.1299564
28360	GO:0065003	macromolecular complex as	0.56	1	0.16129032	45	0.1299564
31431	GO:0080054	low affinity nitrate transmem	0.56	1	0.16129032	45	0.1299564
9709	GO:0016627	oxidoreductase activity, actin	0.56	2	0.32258064	104	0.30034366
4641	GO:0006508	proteolysis	0.56	17	2.7419355	965	2.7868246
2668	GO:0003779	actin binding	0.56	2	0.32258064	105	0.3032316
12498	GO:0022613	ribonucleoprotein complex b	0.56	1	0.16129032	46	0.13284431
18614	GO:0042254 GO:0007046	ribosome biogenesis	0.56	1	0.16129032	46	0.13284431
11747	GO:0019787 GO:0008639	small conjugating protein liga	0.57	6	0.9677419	339	0.9790048
9911	GO:0016879	ligase activity, forming carbo	0.57	8	1.2903225	456	1.3168914
5714	GO:0008170	N-methyltransferase activity,	0.57	1	0.16129032	47	0.13573223
6442	GO:0009073 GO:0016089	aromatic amino acid family t	0.57	1	0.16129032	47	0.13573223
21943	GO:0046417	chorismate metabolic proces	0.57	1	0.16129032	47	0.13573223
17024	GO:0034645 GO:0034961	cellular macromolecule bios	0.58	35	5.645161	1999	5.7729516
14591	GO:0032183	SUMO binding	0.58	1	0.16129032	48	0.13862015
6428	GO:0009059 GO:0043284	macromolecule biosynthetic	0.58	35	5.645161	2003	5.7845035
3756	GO:0052611 GO:0015281	cation channel activity	0.59	1	0.16129032	49	0.14150807
7074	GO:0009815	1-aminocyclopropane-1-carb	0.59	1	0.16129032	49	0.14150807
11830	GO:0019901	protein kinase binding	0.59	1	0.16129032	49	0.14150807
31421	GO:0080044	quercetin 7-O-glucosyltransf	0.59	1	0.16129032	49	0.14150807
7166	GO:0009914	hormone transport	0.60	1	0.16129032	50	0.14439599
19914	GO:0043648	dicarboxylic acid metabolic p	0.60	1	0.16129032	50	0.14439599
27891	GO:0060918	auxin transport	0.60	1	0.16129032	50	0.14439599
31536	GO:0080161	auxin transmembrane transp	0.60	1	0.16129032	50	0.14439599
7173	GO:0009922	fatty acid elongase activity	0.60	1	0.16129032	51	0.14728391
12492	GO:0022607	cellular component assembly	0.60	1	0.16129032	51	0.14728391
30207	GO:0071843	cellular component biogenes	0.60	1	0.16129032	51	0.14728391
30208	GO:0071844	cellular component assembly	0.60	1	0.16129032	51	0.14728391
9933	GO:0016903	oxidoreductase activity, actin	0.60	2	0.32258064	113	0.32633495
4215	GO:0005975	carbohydrate metabolic proc	0.60	17	2.7419355	990	2.8590407
22478	GO:0046982	protein heterodimerization ac	0.61	2	0.32258064	114	0.32922286
9535	GO:0016407	acetyltransferase activity,	0.61	2	0.32258064	115	0.3321108
25635	GO:0051345	positive regulation of hydroly	0.62	1	0.16129032	53	0.15305975
11787	GO:0019842	vitamin binding	0.62	3	0.48387095	177	0.5111618
17918	GO:0035556 GO:0007242	intracellular signal transducti	0.62	1	0.16129032	54	0.15594767
25416	GO:0051119	sugar transmembrane transp	0.63	2	0.32258064	118	0.34077454
4894	GO:0006790	sulfur compound metabolic p	0.63	1	0.16129032	55	0.15883559
9493	GO:0016310	phosphorylation	0.64	43	6.935484	2504	7.2313514
15576	GO:0033177	proton-transporting two-sect	0.64	1	0.16129032	56	0.16172351
5712	GO:0008168 GO:0004480	methyltransferase activity,	0.64	4	0.6451613	244	0.7046524
5715	GO:0008171	O-methyltransferase activity,	0.64	1	0.16129032	57	0.16461143
5964	GO:0008483	transaminase activity	0.64	1	0.16129032	57	0.16461143
6441	GO:0009072	aromatic amino acid family r	0.64	1	0.16129032	57	0.16461143
9813	GO:0016759	cellulose synthase activity	0.64	1	0.16129032	57	0.16461143
9821	GO:0016769	transferase activity, transferr	0.64	1	0.16129032	57	0.16461143
25195	GO:0050896 GO:0051869	response to stimulus	0.64	32	5.16129	1881	5.432177
4913	GO:0006814 GO:0006834	sodium ion transport	0.65	1	0.16129032	58	0.16749935
8028	GO:0010817	regulation of hormone levels	0.65	1	0.16129032	58	0.16749935
8499	GO:0015081 GO:0022816	sodium ion transmembrane t	0.65	1	0.16129032	58	0.16749935
11820	GO:0019887	protein kinase regulator activ	0.65	1	0.16129032	58	0.16749935
18086	GO:0035725	sodium ion transmembrane t	0.65	1	0.16129032	58	0.16749935
25989	GO:0051707 GO:0009613	response to other organism	0.65	1	0.16129032	58	0.16749935
29800	GO:0071436	sodium ion export	0.65	1	0.16129032	58	0.16749935
3323	GO:0004702	receptor signaling protein se	0.65	1	0.16129032	58	0.16749935
13656	GO:0031224	intrinsic to membrane	0.65	20	3.2258065	1193	3.4452884
25998	GO:0051716	cellular response to stimulus	0.65	19	3.064516	1138	3.2864528
9900	GO:0016866	intramolecular transferase ac	0.66	1	0.16129032	59	0.17038727
2831	GO:0004022	alcohol dehydrogenase (NAD	0.66	1	0.16129032	59	0.17038727
5652	GO:0008081 GO:0004434	phosphoric diester hydrolase	0.66	1	0.16129032	60	0.17327519
12741	GO:0030170	pyridoxal phosphate binding	0.66	2	0.32258064	126	0.3638779
28643	GO:0070279	vitamin B6 binding	0.66	2	0.32258064	126	0.3638779
2818	GO:0004003	ATP-dependent DNA helicase	0.67	1	0.16129032	61	0.1761631
22415	GO:0046914	transition metal ion binding	0.67	44	7.096774	2599	7.5057034
11210	GO:0019207	kinase regulator activity	0.67	1	0.16129032	62	0.17905103
17000	GO:0034621	cellular macromolecular corr	0.67	1	0.16129032	62	0.17905103
17457	GO:0035091	phosphatidylinositol binding	0.67	1	0.16129032	62	0.17905103
20186	GO:0043933 GO:0034600	macromolecular complex su	0.67	1	0.16129032	62	0.17905103
20883	GO:0045259 GO:0045255	proton-transporting ATP synt	0.67	1	0.16129032	62	0.17905103
25987	GO:0051704 GO:0051706	multi-organism process	0.67	1	0.16129032	62	0.17905103
2975	GO:0004175 GO:0016809	endopeptidase activity	0.68	5	0.8064516	320	0.9241344
5809	GO:0008289	lipid binding	0.68	4	0.6451613	258	0.74508333
9488	GO:0016301	kinase activity	0.68	29	4.677419	1740	5.0249805
4609	GO:0006464	protein modification process	0.68	47	7.580645	2781	8.031305
25820	GO:0051536	iron-sulfur cluster binding	0.69	1	0.16129032	64	0.18482687
25824	GO:0051540	metal cluster binding	0.69	1	0.16129032	64	0.18482687
9796	GO:0016741	transferase activity, transferr	0.69	4	0.6451613	261	0.7537471
9710	GO:0016628	oxidoreductase activity, actin	0.69	1	0.16129032	65	0.18771479
25314	GO:0051015	actin filament binding	0.69	1	0.16129032	65	0.18771479
10244	GO:0018130	heterocycle biosynthetic proc	0.69	3	0.48387095	199	0.57469606
5651	GO:0008080	N-acetyltransferase activity,	0.70	1	0.16129032	67	0.19349062
2629	GO:0003678 GO:0003679	DNA helicase activity	0.70	1	0.16129032	67	0.19349062
18955	GO:0042625	ATPase activity, coupled to t	0.71	1	0.16129032	68	0.19637854
2999	GO:0004312	fatty acid synthase activity	0.71	1	0.16129032	68	0.19637854
3620	GO:0005057	receptor signaling protein ac	0.71	1	0.16129032	69	0.19926646
9722	GO:0016641	oxidoreductase activity, actin	0.71	1	0.16129032	69	0.19926646
31420	GO:0080043	quercetin 3-O-glucosyltransf	0.71	1	0.16129032	69	0.19926646
4408	GO:0006200	ATP catabolic process	0.71	10	1.6129032	641	1.8511566
9918	GO:0016887 GO:0004002	ATPase activity	0.71	10	1.6129032	641	1.8511566
21600	GO:0046034	ATP metabolic process	0.71	10	1.6129032	641	1.8511566
716	GO:0001071	nucleic acid binding transcrip	0.71	23	3.7096775	1417	4.0921826
2643	GO:0003700 GO:0000130	sequence-specific DNA bind	0.71	23	3.7096775	1417	4.0921826
15436	GO:0033036	macromolecule localization	0.72	6	0.9677419	397	1.1465042
3895	GO:0005543	phospholipid binding	0.72	2	0.32258064	140	0.40430877
9191	GO:0015931	nucleobase, nucleoside, nuc	0.72	1	0.16129032	70	0.20215438
9192	GO:0015932	nucleobase, nucleoside, nuc	0.72	1	0.16129032	70	0.20215438
8676	GO:0015294	solute:cation symporter activ	0.72	2	0.32258064	141	0.4071967
12547	GO:0022857 GO:0005386	transmembrane transporter f	0.72	24	3.8709676	1483	4.282785
3744	GO:0005244	voltage-gated ion channel ac	0.73	1	0.16129032	72	0.20793022
6475	GO:0009108	coenzyme biosynthetic proces	0.73	1	0.16129032	72	0.20793022
9740	GO:0016667	oxidoreductase activity, actin	0.73	1	0.16129032	72	0.20793022
12528	GO:0022832	voltage-gated channel activit	0.73	1	0.16129032	72	0.20793022
15280	GO:0032879	regulation of localization	0.73	1	0.16129032	72	0.20793022
17141	GO:0034762	regulation of transmembrane	0.73	1	0.16129032	72	0.20793022
17144	GO:0034765	regulation of ion transmembr	0.73	1	0.16129032	72	0.20793022
19568	GO:0043269	regulation of ion transport	0.73	1	0.16129032	72	0.20793022
25348	GO:0051049	regulation of transport	0.73	1	0.16129032	72	0.20793022
21058	GO:0045454 GO:0030503	cell redox homeostasis	0.73	3	0.48387095	211	0.6093511
9703	GO:0016620	oxidoreductase activity, actin	0.73	1	0.16129032	73	0.21081814
19684	GO:0043412	macromolecule modification	0.74	48	7.7419353	2900	8.374968
9817	GO:0016763	transferase activity, transferr	0.74	1	0.16129032	74	0.21370606
3965	GO:0005654	nucleoplasm	0.74	1	0.16129032	75	0.21659398
20645	GO:0044451	nucleoplasm part	0.74	1	0.16129032	75	0.21659398
9829	GO:0016779	nucleotidyltransferase activi	0.75	2	0.32258064	148	0.42741212
5663	GO:0008094 GO:0004011	DNA-dependent ATPase act	0.75	1	0.16129032	76	0.2194819
18953	GO:0042623	ATPase activity, coupled	0.75	8	1.2903225	537	1.50813
4478	GO:0006281	DNA repair	0.75	2	0.32258064	149	0.43030006
5037	GO:0006974 GO:0034984	response to DNA damage st	0.75	2	0.32258064	149	0.43030006
11426	GO:0019438	aromatic compound biosynt	0.75	2	0.32258064	149	0.43030006
9538	GO:0016410	N-acyltransferase activity	0.75	1	0.16129032	77	0.22236982



14667	GO:0032259	methylation	0.75	4	0.6451613	285	0.8230572
9823	GO:0016772	transferase activity, transferr	0.76	31	5	1932	5.579461
4358	GO:0006140	regulation of nucleotide meta	0.76	1	0.16129032	80	0.2310336
7146	GO:0009894	regulation of catabolic proce	0.76	1	0.16129032	80	0.2310336
13278	GO:0030811	regulation of nucleotide cata	0.76	1	0.16129032	80	0.2310336
13759	GO:0031329	regulation of cellular cataboli	0.76	1	0.16129032	80	0.2310336
15521	GO:0033121	regulation of purine nucleotid	0.76	1	0.16129032	80	0.2310336
8517	GO:0015103	inorganic anion transmembra	0.77	2	0.32258064	154	0.44473964
4357	GO:0006139 GO:0055134	nucleobase, nucleoside, nuc	0.77	54	8.709678	3285	9.486816
18674	GO:0042325	regulation of phosphorylatio	0.77	1	0.16129032	81	0.23392151
4990	GO:0006915 GO:0008632	apoptosis	0.77	3	0.48387095	227	0.6555578
19831	GO:0043565	sequence-specific DNA bind	0.78	2	0.32258064	159	0.45917925
5624	GO:0008047	enzyme activator activity	0.79	1	0.16129032	85	0.24547319
3307	GO:0004675	transmembrane receptor pro	0.79	5	0.8064516	367	1.0598665
19473	GO:0043170 GO:0043283	macromolecule metabolic pr	0.79	110	17.741936	6553	18.92454
3723	GO:0005215 GO:0005478	transporter activity	0.79	29	4.677419	1844	5.325324
11695	GO:0019725	cellular homeostasis	0.79	3	0.48387095	234	0.67577326
26931	GO:0055085	transmembrane transport	0.79	24	3.8709676	1548	4.4705
11828	GO:0019899	enzyme binding	0.80	3	0.48387095	237	0.684437
9719	GO:0016638	oxidoreductase activity, acti	0.80	1	0.16129032	89	0.25702485
18925	GO:0042592	homeostatic process	0.80	3	0.48387095	238	0.68732494
4897	GO:0006793	phosphorus metabolic proce	0.80	47	7.580645	2925	8.4471655
4900	GO:0006796	phosphate metabolic proces	0.80	47	7.580645	2925	8.4471655
5756	GO:0008219	cell death	0.80	3	0.48387095	239	0.69021285
8209	GO:0012501 GO:0016244	programmed cell death	0.80	3	0.48387095	239	0.69021285
9462	GO:0016265	death	0.80	3	0.48387095	239	0.69021285
14590	GO:0032182	small conjugating protein bin	0.80	1	0.16129032	90	0.2599128
3644	GO:0005102	receptor binding	0.81	1	0.16129032	91	0.2628007
6784	GO:0009451 GO:0016547	RNA modification	0.81	1	0.16129032	91	0.2628007
8494	GO:0015075	ion transmembrane transport	0.81	12	1.9354838	827	2.3883097
9579	GO:0016462	pyrophosphatase activity	0.81	14	2.2580645	954	2.7550755
9859	GO:0016818	hydrolase activity, acting on	0.81	14	2.2580645	956	2.7608514
16603	GO:0034220	ion transmembrane transport	0.82	12	1.9354838	833	2.4056373
4910	GO:0006811	ion transport	0.82	14	2.2580645	959	2.769515
9858	GO:0016817	hydrolase activity, acting on	0.82	14	2.2580645	959	2.769515
3808	GO:0005351 GO:0005403	sugar:hydrogen symporter ac	0.82	1	0.16129032	94	0.27146447
3835	GO:0005402	cation:sugar symporter activ	0.82	1	0.16129032	94	0.27146447
15949	GO:0033554	cellular response to stress	0.82	2	0.32258064	173	0.49961013
4526	GO:0006351 GO:0006350	transcription, DNA-depende	0.82	24	3.8709676	1575	4.548474
15176	GO:0032774	RNA biosynthetic process	0.82	24	3.8709676	1575	4.548474
28365	GO:0065008	regulation of biological qualit	0.82	4	0.6451613	316	0.9125827
4067	GO:0005783	endoplasmic reticulum	0.82	2	0.32258064	174	0.50249803
8967	GO:0015698	inorganic anion transport	0.83	2	0.32258064	176	0.5082739
8677	GO:0015295	solute:hydrogen symporter a	0.83	1	0.16129032	98	0.28301615
8681	GO:0015299	solute:hydrogen antiporter ac	0.83	1	0.16129032	98	0.28301615
25379	GO:00051082	unfolded protein binding	0.83	1	0.16129032	98	0.28301615
4909	GO:0006810 GO:0015457 GO	transport	0.83	36	5.806452	2315	6.6855345
25529	GO:00051234	establishment of localization	0.83	36	5.806452	2315	6.6855345
16851	GO:0034470	ncRNA processing	0.83	1	0.16129032	99	0.28590405
17039	GO:0034660	ncRNA metabolic process	0.83	1	0.16129032	99	0.28590405
3716	GO:0005198	structural molecule activity	0.83	5	0.8064516	393	1.1349525
25476	GO:00051179	localization	0.84	36	5.806452	2319	6.697086
4849	GO:0006730 GO:0019753 GO	one-carbon metabolic proce	0.84	4	0.6451613	325	0.93857396
16430	GO:0034046	poly(G) RNA binding	0.84	1	0.16129032	100	0.28879198
6663	GO:0009309	amine biosynthetic process	0.84	2	0.32258064	181	0.5227135
5874	GO:0008374	O-acyltransferase activity	0.84	1	0.16129032	102	0.29456782
4844	GO:0006725	cellular aromatic compound	0.85	2	0.32258064	185	0.53426516
19392	GO:0043085	positive regulation of catalyti	0.85	1	0.16129032	104	0.30034366
20343	GO:0044093	positive regulation of molecu	0.85	1	0.16129032	104	0.30034366
12573	GO:0022891	substrate-specific transmem	0.85	18	2.903226	1241	3.5839086
8673	GO:0015291 GO:0015290 GO	secondary active transmem	0.86	5	0.8064516	407	1.1753833
3942	GO:0005618	cell wall	0.86	1	0.16129032	107	0.30900744
11833	GO:0019904	protein domain specific bindi	0.86	1	0.16129032	109	0.31478328
10058	GO:0017111	nucleoside-triphosphatase ac	0.86	12	1.9354838	878	2.5355935
17020	GO:0034641	cellular nitrogen compound r	0.86	58	9.354838	3678	10.621769
12868	GO:0030312	external encapsulating struct	0.87	1	0.16129032	111	0.3205591
4512	GO:0006325	chromatin organization	0.87	1	0.16129032	112	0.32344702
5070	GO:0007017	microtubule-based process	0.87	1	0.16129032	112	0.32344702
5071	GO:0007018	microtubule-based moveme	0.87	1	0.16129032	112	0.32344702
8680	GO:0015298	solute:cation antiporter activ	0.87	1	0.16129032	112	0.32344702
9730	GO:0016651	oxidoreductase activity, acti	0.87	1	0.16129032	112	0.32344702
25568	GO:0051276 GO:0007001 GO	chromosome organization	0.87	1	0.16129032	112	0.32344702
29081	GO:0070717	poly-purine tract binding	0.87	1	0.16129032	112	0.32344702
4850	GO:0006732 GO:0006752	coenzyme metabolic proces	0.87	1	0.16129032	113	0.32633495
19686	GO:0043414	macromolecule methylation	0.87	1	0.16129032	113	0.32633495
20510	GO:0044260 GO:0034960	cellular macromolecule meta	0.87	90	14.5161295	5677	16.105928
12574	GO:0022892	substrate-specific transporte	0.88	21	3.387097	1463	4.2250266
11522	GO:0019538 GO:0006411	protein metabolic process	0.88	65	10.4838705	4134	11.938661
4906	GO:0006807	nitrogen compound metaboli	0.89	58	9.354838	3725	10.757502
4405	GO:0006195	purine nucleotide catabolic p	0.89	10	0.16129032	773	2.232362
6508	GO:0009143	nucleoside triphosphate cata	0.89	10	0.16129032	773	2.232362
6509	GO:0009144	purine nucleoside triphospha	0.89	10	0.16129032	773	2.232362
6511	GO:0009146	purine nucleoside triphospha	0.89	10	0.16129032	773	2.232362
6519	GO:0009154	purine ribonucleotide catabo	0.89	10	0.16129032	773	2.232362
6530	GO:0009166	nucleotide catabolic process	0.89	10	0.16129032	773	2.232362
6567	GO:0009203	ribonucleoside triphosphate c	0.89	10	0.16129032	773	2.232362
6569	GO:0009205	purine ribonucleoside triphos	0.89	10	0.16129032	773	2.232362
6571	GO:0009207	purine ribonucleoside triphos	0.89	10	0.16129032	773	2.232362
6624	GO:0009261	ribonucleotide catabolic proc	0.89	10	0.16129032	773	2.232362
17034	GO:0034655	nucleobase, nucleoside, nuc	0.89	10	0.16129032	773	2.232362
17035	GO:0034656	nucleobase, nucleoside and	0.89	10	0.16129032	773	2.232362
22209	GO:0046700	heterocycle catabolic proces	0.89	10	0.16129032	773	2.232362
30879	GO:0072523	purine-containing compound	0.89	10	0.16129032	773	2.232362
12532	GO:0022836	gated channel activity	0.89	1	0.16129032	122	0.3523262
9267	GO:0016021	integral to membrane	0.89	15	2.419355	1103	3.1853757
20520	GO:0044270	cellular nitrogen compound c	0.89	10	0.16129032	777	2.2439137
14392	GO:0031981	nuclear lumen	0.89	1	0.16129032	123	0.35521415
25485	GO:0051188	cofactor biosynthetic proces	0.89	1	0.16129032	123	0.35521415
9295	GO:0016053	organic acid biosynthetic pro	0.89	2	0.32258064	211	0.6093511
21922	GO:0046394	carboxylic acid biosynthetic p	0.89	2	0.32258064	211	0.6093511
4916	GO:0006818	hydrogen transport	0.90	3	0.48387095	292	0.84327257
9246	GO:0015992	proton transport	0.90	3	0.48387095	292	0.84327257
9583	GO:0016469	proton-transporting two-sect	0.90	1	0.16129032	127	0.36676583
6563	GO:0009199	ribonucleoside triphosphate r	0.90	10	0.16129032	790	2.2814567
6515	GO:0009150	purine ribonucleotide metab	0.90	10	0.16129032	791	2.2843447
22479	GO:0046983	protein dimerization activity	0.90	6	0.9677419	517	1.4930545
6506	GO:0009141	nucleoside triphosphate met	0.91	10	0.16129032	796	2.2987843
20356	GO:0044106	cellular amine metabolic pro	0.91	3	0.48387095	303	0.8750397
20619	GO:0044425	membrane part	0.91	21	3.387097	1523	4.398302
19532	GO:0043233	organelle lumen	0.92	1	0.16129032	137	0.39564502
28380	GO:0070013	intracellular organelle lumen	0.92	1	0.16129032	137	0.39564502
4373	GO:0006163	purine nucleotide metabolic p	0.92	10	0.16129032	810	2.339215
6622	GO:0009259 GO:0009121	ribonucleotide metabolic pro	0.92	10	0.16129032	812	2.344991
13531	GO:0031072	heat shock protein binding	0.92	2	0.32258064	230	0.6642216
20531	GO:0044281	small molecule metabolic pro	0.92	25	4.032258	1788	5.1636004
28378	GO:0070011	peptidase activity, acting on	0.92	6	0.9677419	537	1.508113
3724	GO:0005216	ion channel activity	0.92	1	0.16129032	140	0.40430877
6662	GO:0009308	amine metabolic process	0.92	3	0.48387095	314	0.9068068
30877	GO:0072521	purine-containing compound	0.93	10	0.16129032	827	2.3883097
9895	GO:0016860	intramolecular oxidoreductas	0.93	1	0.16129032	146	0.42163628
5791	GO:0008270	zinc ion binding	0.93	26	4.193548	1880	5.4292893
20499	GO:0044249	cellular biosynthetic process	0.93	38	6.129032	2635	7.6096687

18582	GO:0042221	response to chemical stimulus	0.93	3	0.48387095	328	0.94723773
5981	GO:0008509	anion transmembrane transport	0.94	2	0.32258064	245	0.70754033
8679	GO:0015297	antipporter activity	0.94	1	0.16129032	152	0.4389638
8682	GO:0015300	solute:solute antiporter activity	0.94	1	0.16129032	152	0.4389638
27562	GO:0060589	nucleoside-triphosphatase re	0.94	1	0.16129032	152	0.4389638
2660	GO:0003735 GO:0003736	structural constituent of ribosome	0.94	2	0.32258064	246	0.7104283
5909	GO:0008415	acyltransferase activity	0.94	3	0.48387095	330	0.95301354
4917	GO:0006820 GO:0006822	anion transport	0.94	2	0.32258064	247	0.7133162
14386	GO:0031974	membrane-enclosed lumen	0.94	1	0.16129032	154	0.44473964
5661	GO:0008092	cytoskeletal protein binding	0.94	2	0.32258064	249	0.719092
5763	GO:0008233	peptidase activity	0.94	6	0.9677419	565	1.6316746
20532	GO:0044282	small molecule catabolic process	0.94	10	1.6129032	854	2.4662836
8496	GO:0015078	hydrogen ion transmembrane transport	0.94	1	0.16129032	160	0.4620672
20517	GO:0044267	cellular protein metabolic process	0.94	47	7.580645	3225	9.313541
6427	GO:0009058	biosynthetic process	0.95	40	6.451613	2796	8.074624
9308	GO:0016070	RNA metabolic process	0.95	25	4.032258	1855	5.3570914
9494	GO:0016311	dephosphorylation	0.95	4	0.6451613	425	1.227366
5764	GO:0008234 GO:0004220	cysteine-type peptidase activity	0.95	1	0.16129032	163	0.47073093
5055	GO:0006996	organelle organization	0.95	1	0.16129032	164	0.47361887
25483	GO:0051186	cofactor metabolic process	0.95	1	0.16129032	164	0.47361887
20533	GO:0044283	small molecule biosynthetic process	0.95	3	0.48387095	347	1.0021082
19126	GO:0042803	protein homodimerization activity	0.95	2	0.32258064	265	0.7652988
9699	GO:0016616	oxidoreductase activity, acting on NADPH	0.95	2	0.32258064	266	0.7681867
6077	GO:0008652	cellular amino acid biosynthesis	0.95	1	0.16129032	169	0.48805845
4755	GO:0006629	lipid metabolic process	0.95	6	0.9677419	590	1.7038727
22007	GO:0046483	heterocycle metabolic process	0.96	13	2.096774	1094	3.1593843
3955	GO:0005634	nucleus	0.96	18	2.903226	1433	4.138389
9768	GO:0016706	oxidoreductase activity, acting on NADH	0.96	1	0.16129032	175	0.505386
18912	GO:0042578	phosphoric ester hydrolase activity	0.96	4	0.6451613	444	1.2822365
4649	GO:0006520 GO:0006519	cellular amino acid metabolic process	0.96	2	0.32258064	277	0.7995538
20498	GO:0044248	cellular catabolic process	0.96	10	1.6129032	894	2.5818002
20622	GO:0044428	nuclear part	0.96	1	0.16129032	178	0.5140497
20521	GO:0044271	cellular nitrogen compound transport	0.96	3	0.48387095	367	1.0598665
4109	GO:0005840 GO:0033279	ribosome	0.96	7	1.1290323	682	1.9695613
7691	GO:0010467	gene expression	0.96	26	4.193548	1974	5.7007537
5018	GO:0006950	response to stress	0.96	6	0.9677419	611	1.764519
5610	GO:0008026	ATP-dependent helicase activity	0.96	1	0.16129032	183	0.52848935
28401	GO:0070035	purine NTP-dependent helicase activity	0.96	1	0.16129032	183	0.52848935
6425	GO:0009056	catabolic process	0.97	12	1.9354838	1051	3.0352037
4867	GO:0006753	nucleoside phosphate metabolic process	0.97	10	1.6129032	914	2.6395588
6484	GO:0009117	nucleotide metabolic process	0.97	10	1.6129032	914	2.6395588
2657	GO:0003727 GO:0003728	single-stranded RNA binding	0.97	1	0.16129032	188	0.54292893
3068	GO:0004386	helicase activity	0.97	1	0.16129032	189	0.54581684
9697	GO:0016614	oxidoreductase activity, acting on NADH	0.97	2	0.32258064	293	0.84616053
9839	GO:0016791 GO:0016302	phosphatase activity	0.97	3	0.48387095	383	1.1060733
2626	GO:0003674 GO:0005554	molecular function	0.97	416	67.09677	24394	70.447914
30206	GO:0071842	cellular component organization	0.97	1	0.16129032	193	0.5573685
20488	GO:0044238	primary metabolic process	0.97	144	23.225807	9167	26.47356
3340	GO:0004721	phosphoprotein phosphatase activity	0.97	1	0.16129032	199	0.57469606
9889	GO:0016853	isomerase activity	0.97	2	0.32258064	306	0.8837035
26932	GO:0055086	nucleobase, nucleoside and nucleotide metabolic process	0.98	10	1.6129032	944	2.7261963
13018	GO:0030529	ribonucleoprotein complex	0.98	7	1.1290323	741	2.1399486
4558	GO:0006396 GO:0006394	RNA processing	0.98	1	0.16129032	219	0.63245445
5019	GO:0006952 GO:0002217 GO:0002218	defense response	0.98	1	0.16129032	221	0.63823026
12533	GO:0022838	substrate-specific channel activity	0.98	1	0.16129032	221	0.63823026
8660	GO:0015267 GO:0015249 GO:0005554	channel activity	0.98	1	0.16129032	226	0.6526699
12515	GO:0022803	passive transmembrane transport	0.98	1	0.16129032	226	0.6526699
8211	GO:0012505	endomembrane system	0.99	1	0.16129032	242	0.6988766
3178	GO:0004519	endonuclease activity	0.99	2	0.32258064	356	1.0280994
20487	GO:0044237	cellular metabolic process	0.99	123	19.838709	8185	23.637265
30306	GO:0071944	cell periphery	0.99	1	0.16129032	259	0.74797124
2627	GO:0003676	nucleic acid binding	0.99	30	4.83871	2453	7.0840673
3177	GO:0004518	nuclease activity	1.00	2	0.32258064	427	1.2331418
13041	GO:0030554	adenyl nucleotide binding	1.00	3	0.48387095	550	1.5883559
14965	GO:0032559	adenyl ribonucleotide binding	1.00	3	0.48387095	550	1.5883559
19527	GO:0043228	non-membrane-bounded organelle	1.00	7	1.1290323	923	2.66555
19531	GO:0043232	intracellular non-membrane-bounded organelle	1.00	7	1.1290323	923	2.66555
19533	GO:0043234	protein complex	1.00	6	0.9677419	848	2.448956
3876	GO:0005515 GO:0045308	protein binding	1.00	97	15.645162	6933	20.021948
7229	GO:0009987 GO:0008151 GO:0005554	cellular process	1.00	157	25.32258	10601	30.614838
3863	GO:0005488	binding	1.00	212	34.19355	13903	40.15075
3884	GO:0005524	ATP binding	1.00	2	0.32258064	524	1.51327
19125	GO:0042802	identical protein binding	1.00	3	0.48387095	697	2.01288
19526	GO:0043227	membrane-bounded organelle	1.00	20	3.2258065	2142	6.185924
19530	GO:0043231	intracellular membrane-bounded organelle	1.00	20	3.2258065	2142	6.185924
15392	GO:0032991	macromolecular complex	1.00	13	2.096774	1616	4.666878
9266	GO:0016020	membrane	1.00	42	6.774194	3741	10.803708
131	GO:0000166	nucleotide binding	1.00	8	1.2903225	1213	3.5030468
14959	GO:0032553	ribonucleotide binding	1.00	3	0.48387095	795	2.2958963
14961	GO:0032555	purine ribonucleotide binding	1.00	3	0.48387095	795	2.2958963
10033	GO:0017076	purine nucleotide binding	1.00	3	0.48387095	797	2.3016722
18000	GO:0035639	purine ribonucleoside triphosphate binding	1.00	2	0.32258064	769	2.2208104
19525	GO:0043226	organelle	1.00	27	4.354839	3013	8.701303
19528	GO:0043229	intracellular organelle	1.00	27	4.354839	3013	8.701303
2653	GO:0003723	RNA binding	1.00	2	0.32258064	797	2.3016722
20640	GO:0044446	intracellular organelle part	1.00	1	0.16129032	710	2.0504231
20616	GO:0044422	organelle part	1.00	1	0.16129032	712	2.0561988
3945	GO:0005622	intracellular	1.00	49	7.903226	4751	13.720507
4027	GO:0005737	cytoplasm	1.00	13	2.096774	2001	5.7787275
20638	GO:0044444	cytoplasmic part	1.00	9	1.451613	1644	4.7477403
20618	GO:0044424	intracellular part	1.00	36	5.806452	3853	11.127155
3903	GO:0005575 GO:0008372	cellular component	1.00	101	16.290323	8515	24.590637
3946	GO:0005623	cell	1.00	92	14.83871	8227	23.758917
20657	GO:0044464	cell part	1.00	92	14.83871	8227	23.758917