#	name	n	avg_len	avg_dis	Z	p	]							
1	DNA-binding	6518	546.53	0.87	46.90	1		#	name	n	avg_len	avg_dis	z	p
3	Developmental protein  Activator	3897 2574	655.21 600.51	0.86	28.12	1		1	DNA-binding	6518	546.53	0.87	44.32	1
4	Repressor	1988	589.29	0.85	22.63	1		2 3	Developmental protein  Activator	3897 2574	655.21 600.51	0.86	28.98 27.75	1
5	RNA-binding Chromatin regulator	2728 1038	575.76 847.06	0.76	16.62 13.91	1		4	Repressor	1988	589.29	0.85	22.04	1
7	Ribonucleoprotein	1886	272.29	0.60	13.39	1		5	Ribonucleoprotein	1886	272.29	0.60	18.90	1
8	Serine/threonine-protein ki	1782	802.24	0.84	11.56	1		7	RNA-binding Ribosomal protein	2728 1408	575.76 186.38	0.76	17.90 15.70	1
9	Chaperone Ribosomal protein	937	430.43 186.38	0.71	10.02 9.34	1		8	Chromatin regulator	1038	847.06	0.90	12.76	1
11	Growth factor	398	299.63	0.70	8.98	1		9	Chaperone	937	430.43	0.71	10.68	1
12	Protein kinase inhibitor	49	337.20	0.96	8.34	1		11	Hormone Growth factor	338 398	221.13 299.63	0.59	10.32	1
13 14	Calmodulin-binding  Hormone	520 338	1229.00 221.13	0.90	7.57	1		12	Protein kinase inhibitor	49	337.20	0.96	9.16	1
15	Cyclin	133	422.71	0.87	7.18	1		13	Serine/threonine-protein ki Neuropeptide	1782 105	802.24 234.96	0.84	9.16 8.31	1
16	Signal transduction inhibitor	115	408.43	0.84	6.76	1	X	15	Calmodulin-binding	520	1229.00	0.90	6.69	1
17 18	Guanine-nucleotide releasin GTPase activation	319 424	1144.39 867.35	0.96	6.40	1		16	Amphibian defense peptide	49	85.80	0.53	6.53	1
19	Growth factor binding	50	593.98	1	6.09	1	X	17 18	Cyclin  Growth factor binding	133	422.71 593.98	0.87	6.48	1
20	Neuropeptide Potassium channel	105 191	234.96 621.52	0.68	5.99 5.10	1		19	Signal transduction inhibitor	115	408.43	0.84	6.45	1
22	Calcium channel	193	1397.77	0.83	5.09	1		20	Protein phosphatase inhibitor	64	352.86	0.81	6.10	1
23	Protein phosphatase inhibitor	64	352.86	0.81	5.07	1		21	Guanine-nucleotide releasin Mitogen	319 137	1144.39 286.03	0.96	5.62 5.56	1
24 25	Tyrosine-protein kinase  Mitogen	376 137	863.00 286.03	0.89	5.04	1		23	GTPase activation	424	867.35	0.88	5.42	1
26	Vasoactive	46	267.00	0.76	4.29	1	1	24	Vasoactive	46	267.00	0.76	5.21	1
27	Heparin-binding	221	650.97	0.73	3.88	1	M \	25 26	Potassium channel Antibiotic	191 270	621.52 152.33	0.85	4.90 4.82	1
28 29	Muscle protein  Actin-binding	193 837	920.01 974.92	0.73	3.81	1	AL &	27	Calcium channel	193	1397.77	0.93	4.52	1
30	Amphibian defense peptide	49	85.80	0.77	3.34	1		28	Muscle protein	193	920.01	0.73	4.46	1
31	Helicase	739	1086.05	0.87	3.29	1	\ \	30	rRNA-binding Heparin-binding	319 221	220.01 650.97	0.47	4.21	1
33	Prion  Ion channel	22 1027	497.05 861.88	0.91	3.06 2.89	1	$\backslash \backslash \backslash$	31	Fungicide	81	129.59	0.40	3.69	1
34	Voltage-gated channel	386	816.98	0.78	2.87	1		32	Tyrosine-protein kinase  Antimicrobial	376 349	863.00	0.89	3.68	1
35 36	Viral nucleoprotein	39 26	1202.79	0.90 0.77	2.46 2.25	1 0.99		34	Antimicrobial Actin-binding	837	191.07 974.92	0.38	3.55 3.11	1
37	Tumor antigen  Exonuclease	239	428.81 725.99	0.77	2.25	0.99		35	Prion	22	497.05	0.91	3.09	1
38	Segmentation polarity protein	24	712.75	0.92	2.17	0.99	XX	36	Defensin Protein synthesis inhibitor	53 36	81.09 419.33	0.30	2.60	0.99
39 40	Motor protein  Initiation factor	467 248	1227.67 489.76	0.83	1.92 1.78	0.97	$\times$	38	Viral nucleoprotein	39	1202.79	0.90	2.31	0.99
41	rRNA-binding	319	220.01	0.63	1.78	0.97		39	Voltage-gated channel	386	816.98	0.78		0.98
42	Topoisomerase	60	910.32	0.92	1.67	0.97		40	Tumor antigen  Motor protein	26 467	428.81 1227.67	0.77		0.99
43	Protein synthesis inhibitor  RNA-directed DNA polymerase	36 62	419.33 1565.08	0.69	1.64	0.97	<b>\</b>	42	Segmentation polarity protein	24	712.75	0.92	1.84	0.99
45	Aminoacyl-tRNA synthetase	243	673.71	0.67	-1.79	0.04		43	Cytokine	433	236.45	0.43		0.96
46	Antioxidant	111	203.40	0.34	-1.79	0.04		44 45	Metalloenzyme inhibitor  Metalloprotease inhibitor	34	303.21 264.50	0.59	1.52 1.44	0.95
47	tRNA-binding Thiol protease inhibitor	119 63	575.46 411.06	0.56	-2.01	0.03	1	46	Topoisomerase	60	910.32	0.92		0.95
49	Hemostasis impairing toxin	55	297.55	0.35	-2.10	0.03		47	Neurotoxin	66	209.62	0.17		0.03
50	Aspartyl protease	120	942.30	0.64	-2.39	0.01	$\setminus \setminus \mathcal{I}$	48	tRNA-binding  Bacteriolytic enzyme	119 35	575.46 434.66	0.56		0.02
51 52	Voltage-gated sodium channe  Ion channel impairing toxin	60	79.55 74.92	0.05	-2.42 -2.47	0.01		50	Kinase	3072	730.20	0.71	-2.57	0.01
53	Nuclease	703	668.54	0.60	-2.49	0.01	X	51	Endonuclease Nuclease	443 703	728.14 668.54	0.60	-2.85 -2.97	0
54	Bacteriolytic enzyme	35	434.66	0.31	-2.53	0.01		53	Aminoacyl-tRNA synthetase	243	673.71	0.67	-3.11	0
<ul><li>55</li><li>56</li></ul>	Toxin Endonuclease	214 443	412.51 728.14	0.39	-2.56 -2.59	0.01		54	Prenyltransferase	39	376.21	0.31	-3.22	0
57	Elongation factor	106	467.68	0.48	-2.59	0.01		55	Elongation factor Hemagglutinin	106	467.68 281.22	0.48	-3.24 -3.28	0
58 59	Photorogentor protein	39 77	376.21 540.68	0.31	-2.59 -3.02	0.01		57	Protease inhibitor	284	446.29	0.41	-3.43	0
60	Photoreceptor protein  Myosin	185	1275.20	0.47	-3.02	0.01		58	Aspartyl protease	120	942.30	0.64	-3.56	0
61	Retinal protein	47	384.06	0.28	-3.37	0	KX	59 60	Myosin  Photoreceptor protein	185 77	1275.20 540.68	0.72	-3.79 -4.01	0
62 63	Hemagglutinin Neurotoxin	23 66	281.22 209.62	0.13	-3.37 -3.80	0		61	Retinal protein	47	384.06	0.28	-4.24	0
64	RNA-directed RNA polymerase		2506.11	0.87	-4.11	0		62	Dipeptidase	22	522.27	0.23	-4.76	0
65	Protease inhibitor	284	446.29	0.41	-4.15	0		63	Serine protease inhibitor  Porin	182 63	497.66 318.84	0.38	-5.07 -5.21	0
66 67	Integrin Dipeptidase	71 22	1038.25 522.27	0.70	-4.29 -4.43	0	<b>/</b>	65	Integrin	71	1038.25	0.70	-5.45	0
68	Porin	63	318.84	0.21	-4.55	0		66	RNA-directed RNA polymerase Peroxidase	62 221	2506.11 457.61	0.87	-5.89 -6.34	0
69 70	Serine protease inhibitor Peroxidase	182 221	497.66 457.61	0.38	-4.92 -5.50	0		68	Threonine protease	138	246.88	0.40	-6.39	0
71	Nucleotidyltransferase	600	969.68	0.40	-6.18	0		69	Serine esterase	141	423.09	0.28	-8.09	0
72	Receptor	3424	647.92	0.59	-7.09	0		70	Nucleotidyltransferase  Dioxygenase	366	969.68 622.32	0.63	-8.50 -8.64	0
73 74	Serine esterase  Dioxygenase	141 366	423.09 622.32	0.28	-7.21 -7.39	0	X	72	Carboxypeptidase	116	631.16	0.37	-9.18	0
75	Threonine protease	138	246.88	0.48	-7.50	0		73	Serine protease	460	700.07	0.50	-9.55	0
76	Carboxypeptidase	116	631.16	0.37	-8.25	0		74	Metalloprotease  Methyltransferase	507 874	688.25 611.22	0.56	-10.40 -10.41	0
77 78	Methyltransferase  Metalloprotease	874 507	611.22 688.25	0.47	-8.33 -8.43	0		76	Aminopeptidase	130	668.72	0.37	-10.59	0
79	Serine protease	460	700.07	0.50	-8.87	0		77	Receptor  Aminotransferase	3424 202	647.92 451.05	0.59	-11.81 -11.95	0
80 81	Aminopeptidase  Aminotransferase	130	668.72	0.37	-9.10	0		79	Acyltransferase	867	531.58	0.24	-13.00	0
81	Aminotransferase  Decarboxylase	202 195	451.05 488.21	0.24	-10.23 -10.70		-	80	Decarboxylase	195	488.21	0.25	-13.02	0
83	Acyltransferase	867	531.58	0.42	-11.28	0	<b>/</b>	81	Isomerase Protease	931 1863	422.72 674.42	0.35	-15.23 -16.00	0
84 85	G-protein coupled receptor  Transducer	1385 1703	465.62 482.28	0.39	-12.45 -12.56			83	Transducer	1703		0.34	-18.09	Ŭ
86	Protease	1863		0.41	-12.56			84	G-protein coupled receptor	1385	465.62	0.39	-18.15	$\vdash$
87	Isomerase	931	422.72	0.35	-13.60	0		85	Glycosidase Ligase	697 995	570.50 693.30	0.37	-19.18 -20.02	
88 89	Glycosidase Glycosyltransferase	697 1134	570.50 551.26	0.37	-16.81 -17.04	0		87	Glycosyltransferase	1134	551.26	0.40	-20.02	0
90	Ligase	995	693.30	0.40	-17.04	_	/ >	88	Monooxygenase	555	503.36	0.20	-24.45	$\vdash$
91	Transferase	8846	631.95	0.55	-19.72	0		89   90	Lyase Transferase	1431 8846	481.37 631.95	0.30	-25.90 -27.02	$\vdash$
-	Monooxygenase	555	503.36	0.20	-20.29	+		91				0.51	-32.98	$\vdash$
92 93	* -		481 37	0.30	-23 62	0		$\vdash$	Hydrolase					
92 93 94	Lyase Hydrolase	1431 7564	481.37 614.81	0.30 0.51	-23.62 -26.99	_		92	Oxidoreductase	4126	472.25	0.28	-46.56	