

Table S1. Enriched of KEGG pathways in *P. melete* transcriptome.

#	Pathway ID	Pathway	All genes with pathway annotation (22769)	Level 1	Level 2
1	ko01100	Metabolic pathways	3356 (14.74%)	Metabolism	Global map
2	ko04810	Regulation of actin cytoskeleton	981 (4.31%)	Cellular Processes	Cell motility
3	ko04510	Focal adhesion	881 (3.87%)	Cellular Processes	Cell communication
4	ko00230	Purine metabolism	840 (3.69%)	Metabolism	Nucleotide metabolism
5	ko04270	Vascular smooth muscle contraction	792 (3.48%)	Organismal Systems	Circulatory system
6	ko05200	Pathways in cancer	792 (3.48%)	Human Diseases	Cancers: Overview
7	ko05016	Huntington's disease	739 (3.25%)	Human Diseases	Neurodegenerative diseases
8	ko03013	RNA transport	646 (2.84%)	Genetic Information Processing	Translation
9	ko04530	Tight junction	607 (2.67%)	Cellular Processes	Cell communication
10	ko04976	Bile secretion	606 (2.66%)	Organismal Systems	Digestive system
11	ko04010	MAPK signaling pathway	599 (2.63%)	Environmental Information Processing	Signal transduction
12	ko04080	Neuroactive ligand-receptor interaction	592 (2.6%)	Environmental Information Processing	Signaling molecules and interaction
13	ko03040	Spliceosome	582 (2.56%)	Genetic Information Processing	Transcription
14	ko05169	Epstein-Barr virus infection	576 (2.53%)	Human Diseases	Infectious diseases: Viral
15	ko04910	Insulin signaling pathway	541 (2.38%)	Organismal Systems	Endocrine system
16	ko04144	Endocytosis	508 (2.23%)	Cellular Processes	Transport and catabolism
17	ko00240	Pyrimidine metabolism	499 (2.19%)	Metabolism	Nucleotide metabolism
18	ko04972	Pancreatic secretion	492 (2.16%)	Organismal Systems	Digestive system
19	ko05414	Dilated cardiomyopathy	489 (2.15%)	Human Diseases	Cardiovascular diseases
20	ko04974	Protein digestion and absorption	478 (2.1%)	Organismal Systems	Digestive system
21	ko05132	Salmonella infection	477 (2.09%)	Human Diseases	Infectious diseases: Bacterial
22	ko05166	HTLV-I infection	472 (2.07%)	Human Diseases	Infectious diseases: Viral
23	ko05410	Hypertrophic cardiomyopathy (HCM)	469 (2.06%)	Human Diseases	Cardiovascular diseases
24	ko04062	Chemokine signaling pathway	464 (2.04%)	Organismal Systems	Immune system
25	ko04120	Ubiquitin mediated proteolysis	462 (2.03%)	Genetic Information Processing	Folding, sorting and degradation
26	ko05146	Amoebiasis	449 (1.97%)	Human Diseases	Infectious diseases: Parasitic

27	ko04666	Fc gamma R-mediated phagocytosis	439 (1.93%)	Organismal Systems	Immune system
28	ko05164	Influenza A	426 (1.87%)	Human Diseases	Infectious diseases: Viral
29	ko04020	Calcium signaling pathway	422 (1.85%)	Environmental Information Processing	Signal transduction
30	ko04145	Phagosome	421 (1.85%)	Cellular Processes	Transport and catabolism
31	ko05202	Transcriptional misregulation in cancer	421 (1.85%)	Human Diseases	Cancers: Overview
32	ko04260	Cardiac muscle contraction	408 (1.79%)	Organismal Systems	Circulatory system
33	ko04512	ECM-receptor interaction	405 (1.78%)	Environmental Information Processing	Signaling molecules and interaction
34	ko02010	ABC transporters	402 (1.77%)	Environmental Information Processing	Membrane transport
35	ko04142	Lysosome	400 (1.76%)	Cellular Processes	Transport and catabolism
36	ko04722	Neurotrophin signaling pathway	398 (1.75%)	Organismal Systems	Nervous system
37	ko03015	mRNA surveillance pathway	392 (1.72%)	Genetic Information Processing	Translation
38	ko05010	Alzheimer's disease	379 (1.66%)	Human Diseases	Neurodegenerative diseases
39	ko04914	Progesterone-mediated oocyte maturation	379 (1.66%)	Organismal Systems	Endocrine system
40	ko04520	Adherens junction	362 (1.59%)	Cellular Processes	Cell communication
41	ko05110	Vibrio cholerae infection	361 (1.59%)	Human Diseases	Infectious diseases: Bacterial
42	ko04110	Cell cycle	357 (1.57%)	Cellular Processes	Cell growth and death
43	ko04141	Protein processing in endoplasmic reticulum	355 (1.56%)	Genetic Information Processing	Folding, sorting and degradation
44	ko00564	Glycerophospholipid metabolism	349 (1.53%)	Metabolism	Lipid metabolism
45	ko04310	Wnt signaling pathway	348 (1.53%)	Environmental Information Processing	Signal transduction
46	ko04971	Gastric acid secretion	346 (1.52%)	Organismal Systems	Digestive system
47	ko03020	RNA polymerase	342 (1.5%)	Genetic Information Processing	Transcription
48	ko04660	T cell receptor signaling pathway	339 (1.49%)	Organismal Systems	Immune system
49	ko04514	Cell adhesion molecules (CAMs)	327 (1.44%)	Environmental Information Processing	Signaling molecules and interaction
50	ko04360	Axon guidance	317 (1.39%)	Organismal Systems	Development

51	ko05168	Herpes simplex infection	317 (1.39%)	Human Diseases	Infectious diseases: Viral
52	ko04670	Leukocyte transendothelial migration	312 (1.37%)	Organismal Systems	Immune system
53	ko05416	Viral myocarditis	310 (1.36%)	Human Diseases	Cardiovascular diseases
54	ko03008	Ribosome biogenesis in eukaryotes	309 (1.36%)	Genetic Information Processing	Translation
55	ko04970	Salivary secretion	305 (1.34%)	Organismal Systems	Digestive system
56	ko00561	Glycerolipid metabolism	303 (1.33%)	Metabolism	Lipid metabolism
57	ko04146	Peroxisome	298 (1.31%)	Cellular Processes	Transport and catabolism
58	ko05034	Alcoholism	291 (1.28%)	Human Diseases	Substance dependence
59	ko04724	Glutamatergic synapse	290 (1.27%)	Organismal Systems	Nervous system
60	ko05100	Bacterial invasion of epithelial cells	284 (1.25%)	Human Diseases	Infectious diseases: Bacterial
61	ko00983	Drug metabolism - other enzymes	281 (1.23%)	Metabolism	Xenobiotics biodegradation and metabolism
62	ko05215	Prostate cancer	281 (1.23%)	Human Diseases	Cancers: Specific types
63	ko05152	Tuberculosis	277 (1.22%)	Human Diseases	Infectious diseases: Bacterial
64	ko05012	Parkinson's disease	273 (1.2%)	Human Diseases	Neurodegenerative diseases
65	ko04962	Vasopressin-regulated water reabsorption	265 (1.16%)	Organismal Systems	Excretory system
66	ko05211	Renal cell carcinoma	264 (1.16%)	Human Diseases	Cancers: Specific types
67	ko04012	ErbB signaling pathway	264 (1.16%)	Environmental Information Processing	Signal transduction
68	ko00190	Oxidative phosphorylation	262 (1.15%)	Metabolism	Energy metabolism
69	ko04726	Serotonergic synapse	262 (1.15%)	Organismal Systems	Nervous system
70	ko04720	Long-term potentiation	261 (1.15%)	Organismal Systems	Nervous system
71	ko05145	Toxoplasmosis	257 (1.13%)	Human Diseases	Infectious diseases: Parasitic
72	ko04114	Oocyte meiosis	257 (1.13%)	Cellular Processes	Cell growth and death
73	ko04727	GABAergic synapse	255 (1.12%)	Organismal Systems	Nervous system
74	ko03460	Fanconi anemia pathway	254 (1.12%)	Genetic Information Processing	Replication and repair
75	ko05220	Chronic myeloid leukemia	250 (1.1%)	Human Diseases	Cancers: Specific types
76	ko05160	Hepatitis C	248 (1.09%)	Human Diseases	Infectious diseases: Viral
77	ko05130	Pathogenic Escherichia coli infection	245 (1.08%)	Human Diseases	Infectious diseases: Bacterial
78	ko00310	Lysine degradation	243 (1.07%)	Metabolism	Amino acid metabolism

79	ko04721	Synaptic vesicle cycle	240 (1.05%)	Organismal Systems	Nervous system
80	ko04320	Dorso-ventral axis formation	240 (1.05%)	Organismal Systems	Development
81	ko04728	Dopaminergic synapse	238 (1.05%)	Organismal Systems	Nervous system
82	ko00500	Starch and sucrose metabolism	233 (1.02%)	Metabolism	Carbohydrate metabolism
83	ko05222	Small cell lung cancer	232 (1.02%)	Human Diseases	Cancers: Specific types
84	ko05214	Glioma	230 (1.01%)	Human Diseases	Cancers: Specific types
85	ko03018	RNA degradation	230 (1.01%)	Genetic Information Processing	Folding, sorting and degradation
86	ko05213	Endometrial cancer	226 (0.99%)	Human Diseases	Cancers: Specific types
87	ko04912	GnRH signaling pathway	224 (0.98%)	Organismal Systems	Endocrine system
88	ko05210	Colorectal cancer	222 (0.98%)	Human Diseases	Cancers: Specific types
89	ko05131	Shigellosis	221 (0.97%)	Human Diseases	Infectious diseases: Bacterial
90	ko04070	Phosphatidylinositol signaling system	220 (0.97%)	Environmental Information Processing	Signal transduction
91	ko04150	mTOR signaling pathway	219 (0.96%)	Environmental Information Processing	Signal transduction
92	ko05032	Morphine addiction	218 (0.96%)	Human Diseases	Substance dependence
93	ko04723	Retrograde endocannabinoid signaling	213 (0.94%)	Organismal Systems	Nervous system
94	ko04730	Long-term depression	211 (0.93%)	Organismal Systems	Nervous system
95	ko04978	Mineral absorption	209 (0.92%)	Organismal Systems	Digestive system
96	ko05212	Pancreatic cancer	207 (0.91%)	Human Diseases	Cancers: Specific types
97	ko04973	Carbohydrate digestion and absorption	203 (0.89%)	Organismal Systems	Digestive system
98	ko04540	Gap junction	202 (0.89%)	Cellular Processes	Cell communication
99	ko00040	Pentose and glucuronate interconversions	198 (0.87%)	Metabolism	Carbohydrate metabolism
100	ko05014	Amyotrophic lateral sclerosis (ALS)	196 (0.86%)	Human Diseases	Neurodegenerative diseases
101	ko00052	Galactose metabolism	195 (0.86%)	Metabolism	Carbohydrate metabolism
102	ko04975	Fat digestion and absorption	195 (0.86%)	Organismal Systems	Digestive system
103	ko05162	Measles	193 (0.85%)	Human Diseases	Infectious diseases: Viral
104	ko04725	Cholinergic synapse	188 (0.83%)	Organismal Systems	Nervous system
105	ko05218	Melanoma	187 (0.82%)	Human Diseases	Cancers: Specific types
106	ko04650	Natural killer cell mediated cytotoxicity	187 (0.82%)	Organismal Systems	Immune system

107	ko05221	Acute myeloid leukemia	186 (0.82%)	Human Diseases	Cancers: Specific types
108	ko04370	VEGF signaling pathway	182 (0.8%)	Environmental Information Processing	Signal transduction
109	ko04916	Melanogenesis	178 (0.78%)	Organismal Systems	Endocrine system
110	ko05340	Primary immunodeficiency	175 (0.77%)	Human Diseases	Immune diseases
111	ko00534	Glycosaminoglycan biosynthesis - heparan sulfate	175 (0.77%)	Metabolism	Glycan biosynthesis and metabolism
112	ko04064	NF-kappa B signaling pathway	173 (0.76%)	Environmental Information Processing	Signal transduction
113	ko04623	Cytosolic DNA-sensing pathway	172 (0.76%)	Organismal Systems	Immune system
114	ko00980	Metabolism of xenobiotics by cytochrome P450	170 (0.75%)	Metabolism	Xenobiotics biodegradation and metabolism
115	ko03320	PPAR signaling pathway	169 (0.74%)	Organismal Systems	Endocrine system
116	ko05216	Thyroid cancer	165 (0.72%)	Human Diseases	Cancers: Specific types
117	ko05223	Non-small cell lung cancer	164 (0.72%)	Human Diseases	Cancers: Specific types
118	ko04920	Adipocytokine signaling pathway	164 (0.72%)	Organismal Systems	Endocrine system
119	ko00520	Amino sugar and nucleotide sugar metabolism	162 (0.71%)	Metabolism	Carbohydrate metabolism
120	ko05120	Epithelial cell signaling in Helicobacter pylori infection	159 (0.7%)	Human Diseases	Infectious diseases: Bacterial
121	ko05412	Arrhythmogenic right ventricular cardiomyopathy (ARVC)	159 (0.7%)	Human Diseases	Cardiovascular diseases
122	ko03010	Ribosome	158 (0.69%)	Genetic Information Processing	Translation
123	ko05031	Amphetamine addiction	157 (0.69%)	Human Diseases	Substance dependence
124	ko00620	Pyruvate metabolism	157 (0.69%)	Metabolism	Carbohydrate metabolism
125	ko05020	Prion diseases	156 (0.69%)	Human Diseases	Neurodegenerative diseases
126	ko04930	Type II diabetes mellitus	153 (0.67%)	Human Diseases	Endocrine and metabolic diseases
127	ko00830	Retinol metabolism	152 (0.67%)	Metabolism	Metabolism of cofactors and vitamins
128	ko05142	Chagas disease (American trypanosomiasis)	150 (0.66%)	Human Diseases	Infectious diseases: Parasitic
129	ko04977	Vitamin digestion and absorption	150 (0.66%)	Organismal Systems	Digestive system
130	ko04664	Fc epsilon RI signaling pathway	149 (0.65%)	Organismal Systems	Immune system
131	ko00562	Inositol phosphate metabolism	148 (0.65%)	Metabolism	Carbohydrate metabolism

132	ko00260	Glycine, serine and threonine metabolism	144 (0.63%)	Metabolism	Amino acid metabolism
133	ko04115	p53 signaling pathway	142 (0.62%)	Cellular Processes	Cell growth and death
134	ko04662	B cell receptor signaling pathway	141 (0.62%)	Organismal Systems	Immune system
135	ko04610	Complement and coagulation cascades	139 (0.61%)	Organismal Systems	Immune system
136	ko04960	Aldosterone-regulated sodium reabsorption	138 (0.61%)	Organismal Systems	Excretory system
137	ko05219	Bladder cancer	137 (0.6%)	Human Diseases	Cancers: Specific types
138	ko04350	TGF-beta signaling pathway	137 (0.6%)	Environmental Information Processing	Signal transduction
139	ko04745	Phototransduction - fly	136 (0.6%)	Organismal Systems	Sensory system
140	ko00982	Drug metabolism - cytochrome P450	136 (0.6%)	Metabolism	Xenobiotics biodegradation and metabolism
141	ko04330	Notch signaling pathway	133 (0.58%)	Environmental Information Processing	Signal transduction
142	ko04380	Osteoclast differentiation	132 (0.58%)	Organismal Systems	Development
143	ko04961	Endocrine and other factor-regulated calcium reabsorption	129 (0.57%)	Organismal Systems	Excretory system
144	ko00330	Arginine and proline metabolism	129 (0.57%)	Metabolism	Amino acid metabolism
145	ko00514	Other types of O-glycan biosynthesis	128 (0.56%)	Metabolism	Glycan biosynthesis and metabolism
146	ko00140	Steroid hormone biosynthesis	126 (0.55%)	Metabolism	Lipid metabolism
147	ko05030	Cocaine addiction	126 (0.55%)	Human Diseases	Substance dependence
148	ko00071	Fatty acid metabolism	124 (0.54%)	Metabolism	Lipid metabolism
149	ko00350	Tyrosine metabolism	124 (0.54%)	Metabolism	Amino acid metabolism
150	ko00280	Valine, leucine and isoleucine degradation	121 (0.53%)	Metabolism	Amino acid metabolism
151	ko00480	Glutathione metabolism	119 (0.52%)	Metabolism	Metabolism of other amino acids
152	ko00051	Fructose and mannose metabolism	118 (0.52%)	Metabolism	Carbohydrate metabolism
153	ko04210	Apoptosis	117 (0.51%)	Cellular Processes	Cell growth and death
154	ko04640	Hematopoietic cell lineage	116 (0.51%)	Organismal Systems	Immune system
155	ko04340	Hedgehog signaling pathway	116 (0.51%)	Environmental Information Processing	Signal transduction
156	ko03420	Nucleotide excision repair	114 (0.5%)	Genetic Information Processing	Replication and repair

157	ko04630	Jak-STAT signaling pathway	114 (0.5%)	Environmental Information Processing	Signal transduction
158	ko00511	Other glycan degradation	112 (0.49%)	Metabolism	Glycan biosynthesis and metabolism
159	ko05134	Legionellosis	111 (0.49%)	Human Diseases	Infectious diseases: Bacterial
160	ko05133	Pertussis	110 (0.48%)	Human Diseases	Infectious diseases: Bacterial
161	ko00970	Aminoacyl-tRNA biosynthesis	109 (0.48%)	Genetic Information Processing	Translation
162	ko00860	Porphyrin and chlorophyll metabolism	107 (0.47%)	Metabolism	Metabolism of cofactors and vitamins
163	ko04620	Toll-like receptor signaling pathway	107 (0.47%)	Organismal Systems	Immune system
164	ko05033	Nicotine addiction	106 (0.47%)	Human Diseases	Substance dependence
165	ko00010	Glycolysis / Gluconeogenesis	106 (0.47%)	Metabolism	Carbohydrate metabolism
166	ko00760	Nicotinate and nicotinamide metabolism	106 (0.47%)	Metabolism	Metabolism of cofactors and vitamins
167	ko00981	Insect hormone biosynthesis	105 (0.46%)	Metabolism	Metabolism of terpenoids and polyketides
168	ko00565	Ether lipid metabolism	104 (0.46%)	Metabolism	Lipid metabolism
169	ko04740	Olfactory transduction	104 (0.46%)	Organismal Systems	Sensory system
170	ko00380	Tryptophan metabolism	104 (0.46%)	Metabolism	Amino acid metabolism
171	ko00053	Ascorbate and aldarate metabolism	103 (0.45%)	Metabolism	Carbohydrate metabolism
172	ko03030	DNA replication	103 (0.45%)	Genetic Information Processing	Replication and repair
173	ko00510	N-Glycan biosynthesis	102 (0.45%)	Metabolism	Glycan biosynthesis and metabolism
174	ko00592	alpha-Linolenic acid metabolism	98 (0.43%)	Metabolism	Lipid metabolism
175	ko03410	Base excision repair	97 (0.43%)	Genetic Information Processing	Replication and repair
176	ko00640	Propanoate metabolism	96 (0.42%)	Metabolism	Carbohydrate metabolism
177	ko03022	Basal transcription factors	93 (0.41%)	Genetic Information Processing	Transcription
178	ko04060	Cytokine-cytokine receptor interaction	91 (0.4%)	Environmental Information Processing	Signaling molecules and interaction
179	ko00100	Steroid biosynthesis	88 (0.39%)	Metabolism	Lipid metabolism
180	ko03440	Homologous recombination	86 (0.38%)	Genetic Information Processing	Replication and repair
181	ko05217	Basal cell carcinoma	84 (0.37%)	Human Diseases	Cancers: Specific types
182	ko04744	Phototransduction	83 (0.36%)	Organismal Systems	Sensory system

183	ko05323	Rheumatoid arthritis	83 (0.36%)	Human Diseases	Immune diseases
184	ko01040	Biosynthesis of unsaturated fatty acids	83 (0.36%)	Metabolism	Lipid metabolism
185	ko00030	Pentose phosphate pathway	83 (0.36%)	Metabolism	Carbohydrate metabolism
186	ko00600	Sphingolipid metabolism	82 (0.36%)	Metabolism	Lipid metabolism
187	ko04964	Proximal tubule bicarbonate reclamation	82 (0.36%)	Organismal Systems	Excretory system
188	ko04621	NOD-like receptor signaling pathway	81 (0.36%)	Organismal Systems	Immune system
189	ko00410	beta-Alanine metabolism	79 (0.35%)	Metabolism	Metabolism of other amino acids
190	ko00062	Fatty acid elongation	79 (0.35%)	Metabolism	Lipid metabolism
191	ko00590	Arachidonic acid metabolism	78 (0.34%)	Metabolism	Lipid metabolism
192	ko00270	Cysteine and methionine metabolism	78 (0.34%)	Metabolism	Amino acid metabolism
193	ko00360	Phenylalanine metabolism	77 (0.34%)	Metabolism	Amino acid metabolism
194	ko04612	Antigen processing and presentation	77 (0.34%)	Organismal Systems	Immune system
195	ko04742	Taste transduction	76 (0.33%)	Organismal Systems	Sensory system
196	ko05144	Malaria	74 (0.33%)	Human Diseases	Infectious diseases: Parasitic
197	ko05322	Systemic lupus erythematosus	73 (0.32%)	Human Diseases	Immune diseases
198	ko00020	Citrate cycle (TCA cycle)	73 (0.32%)	Metabolism	Carbohydrate metabolism
199	ko00512	Mucin type O-Glycan biosynthesis	71 (0.31%)	Metabolism	Glycan biosynthesis and metabolism
200	ko00630	Glyoxylate and dicarboxylate metabolism	69 (0.3%)	Metabolism	Carbohydrate metabolism
201	ko00650	Butanoate metabolism	69 (0.3%)	Metabolism	Carbohydrate metabolism
202	ko05150	Staphylococcus aureus infection	67 (0.29%)	Human Diseases	Infectious diseases: Bacterial
203	ko03430	Mismatch repair	67 (0.29%)	Genetic Information Processing	Replication and repair
204	ko04013	MAPK signaling pathway - fly	66 (0.29%)	Environmental Information Processing	Signal transduction
205	ko00563	Glycosylphosphatidylinositol (GPI)-anchor biosynthesis	66 (0.29%)	Metabolism	Glycan biosynthesis and metabolism
206	ko03050	Proteasome	66 (0.29%)	Genetic Information Processing	Folding, sorting and degradation
207	ko00790	Folate biosynthesis	64 (0.28%)	Metabolism	Metabolism of cofactors and vitamins
208	ko05140	Leishmaniasis	63 (0.28%)	Human Diseases	Infectious diseases: Parasitic



209	ko00250	Alanine, aspartate and glutamate metabolism	61 (0.27%)	Metabolism	Amino acid metabolism
210	ko04966	Collecting duct acid secretion	59 (0.26%)	Organismal Systems	Excretory system
211	ko00591	Linoleic acid metabolism	59 (0.26%)	Metabolism	Lipid metabolism
212	ko04130	SNARE interactions in vesicular transport	59 (0.26%)	Genetic Information Processing	Folding, sorting and degradation
213	ko00061	Fatty acid biosynthesis	58 (0.25%)	Metabolism	Lipid metabolism
214	ko00232	Caffeine metabolism	57 (0.25%)	Metabolism	Biosynthesis of other secondary metabolites
215	ko04614	Renin-angiotensin system	56 (0.25%)	Organismal Systems	Endocrine system
216	ko04711	Circadian rhythm - fly	54 (0.24%)	Organismal Systems	Environmental adaptation
217	ko04710	Circadian rhythm - mammal	53 (0.23%)	Organismal Systems	Environmental adaptation
218	ko00920	Sulfur metabolism	50 (0.22%)	Metabolism	Energy metabolism
219	ko00531	Glycosaminoglycan degradation	49 (0.22%)	Metabolism	Glycan biosynthesis and metabolism
220	ko04622	RIG-I-like receptor signaling pathway	46 (0.2%)	Organismal Systems	Immune system
221	ko00130	Ubiquinone and other terpenoid-quinone biosynthesis	42 (0.18%)	Metabolism	Metabolism of cofactors and vitamins
222	ko00340	Histidine metabolism	42 (0.18%)	Metabolism	Amino acid metabolism
223	ko00900	Terpenoid backbone biosynthesis	41 (0.18%)	Metabolism	Metabolism of terpenoids and polyketides
224	ko05143	African trypanosomiasis	40 (0.18%)	Human Diseases	Infectious diseases: Parasitic
225	ko03060	Protein export	39 (0.17%)	Genetic Information Processing	Folding, sorting and degradation
226	ko00770	Pantothenate and CoA biosynthesis	39 (0.17%)	Metabolism	Metabolism of cofactors and vitamins
227	ko00450	Selenocompound metabolism	35 (0.15%)	Metabolism	Metabolism of other amino acids
228	ko00740	Riboflavin metabolism	35 (0.15%)	Metabolism	Metabolism of cofactors and vitamins
229	ko04122	Sulfur relay system	33 (0.14%)	Genetic Information Processing	Folding, sorting and degradation
230	ko04140	Regulation of autophagy	32 (0.14%)	Cellular Processes	Transport and catabolism
231	ko05320	Autoimmune thyroid disease	32 (0.14%)	Human Diseases	Immune diseases
232	ko00603	Glycosphingolipid biosynthesis - globo series	31 (0.14%)	Metabolism	Glycan biosynthesis and metabolism
233	ko00460	Cyanoamino acid metabolism	29 (0.13%)	Metabolism	Metabolism of other amino acids
234	ko00604	Glycosphingolipid biosynthesis - ganglio series	28 (0.12%)	Metabolism	Glycan biosynthesis and metabolism

235	ko03450	Non-homologous end-joining	28 (0.12%)	Genetic Information Processing	Replication and repair
236	ko00670	One carbon pool by folate	28 (0.12%)	Metabolism	Metabolism of cofactors and vitamins
237	ko00730	Thiamine metabolism	23 (0.1%)	Metabolism	Metabolism of cofactors and vitamins
238	ko00532	Glycosaminoglycan biosynthesis - chondroitin sulfate	22 (0.1%)	Metabolism	Glycan biosynthesis and metabolism
239	ko00072	Synthesis and degradation of ketone bodies	22 (0.1%)	Metabolism	Lipid metabolism
240	ko00601	Glycosphingolipid biosynthesis - lacto and neolacto series	20 (0.09%)	Metabolism	Glycan biosynthesis and metabolism
241	ko04940	Type I diabetes mellitus	20 (0.09%)	Human Diseases	Endocrine and metabolic diseases
242	ko00472	D-Arginine and D-ornithine metabolism	19 (0.08%)	Metabolism	Metabolism of other amino acids
243	ko00533	Glycosaminoglycan biosynthesis - keratan sulfate	15 (0.07%)	Metabolism	Glycan biosynthesis and metabolism
244	ko00430	Taurine and hypotaurine metabolism	15 (0.07%)	Metabolism	Metabolism of other amino acids
245	ko00120	Primary bile acid biosynthesis	14 (0.06%)	Metabolism	Lipid metabolism
246	ko00290	Valine, leucine and isoleucine biosynthesis	14 (0.06%)	Metabolism	Amino acid metabolism
247	ko04950	Maturity onset diabetes of the young	11 (0.05%)	Human Diseases	Endocrine and metabolic diseases
248	ko00780	Biotin metabolism	9 (0.04%)	Metabolism	Metabolism of cofactors and vitamins
249	ko00750	Vitamin B6 metabolism	8 (0.04%)	Metabolism	Metabolism of cofactors and vitamins
250	ko00785	Lipoic acid metabolism	6 (0.03%)	Metabolism	Metabolism of cofactors and vitamins
251	ko00524	Butirosin and neomycin biosynthesis	6 (0.03%)	Metabolism	Biosynthesis of other secondary metabolites
252	ko00471	D-Glutamine and D-glutamate metabolism	5 (0.02%)	Metabolism	Metabolism of other amino acids
253	ko00400	Phenylalanine, tyrosine and tryptophan biosynthesis	4 (0.02%)	Metabolism	Amino acid metabolism
254	ko00300	Lysine biosynthesis	3 (0.01%)	Metabolism	Amino acid metabolism
255	ko05310	Asthma	3 (0.01%)	Human Diseases	Immune diseases
256	ko04672	Intestinal immune network for IgA production	2 (0.01%)	Organismal Systems	Immune system