

Supplementary Table S8. Enrichment and depletion levels within positively-selected gibbon genes**Germ Layers**

Name	Enrichment ratio	Observed	Expected
endoderm	1.083459678	43	39.68767908
ectoderm	0.981969566	49	49.89971347
mesoderm	0.970123531	50	51.53982808

Organs

Name	Enrichment ratio	Observed	Expected
appendix	3.077601411	2	0.649856734
salivary gland	2.656012177	9	3.388538682
duodenum	2.251903471	10	4.440687679
placenta	2.005747126	9	4.487106017
lymph vessels	1.97845805	3	1.516332378
sweat gland	1.937127864	11	5.678510029
breast	1.932848737	16	8.277936963
anus	1.831608937	7	3.821776504
pancreas	1.767216435	21	11.88309456
rectum	1.765094927	13	7.36504298
biliary tract	1.755372657	11	6.266475645
sternum	1.721690953	26	15.10143266
fibula	1.713934929	24	14.00286533
tibia	1.693352741	24	14.1730659
vocal cords	1.685990338	9	5.338108883
abdominal wall	1.674853207	17	10.15014327
testis	1.669153658	25	14.97765043
scapula	1.66786141	24	14.38968481
aorta	1.661904762	9	5.415472779
radius	1.660718534	24	14.45157593
femur	1.647034394	25	15.17879656
ulna	1.641387419	24	14.6217765
liver	1.627364775	28	17.20573066
clavicle	1.620805759	24	14.80744986

chest wall	1.619930215	29	17.90200573
humerus	1.607369027	24	14.93123209
bone marrow	1.59758635	11	6.885386819
adrenal gland	1.589253188	9	5.663037249
shin	1.57633243	25	15.85959885
thigh	1.57633243	26	16.49398281
thyroid	1.57633243	7	4.440687679
rib	1.57236515	29	18.44355301
rib cage	1.57236515	29	18.44355301
pharynx	1.562045429	16	10.24297994
cerebrospinal fluid	1.559428061	9	5.771346705
nail	1.541624193	13	8.432664756
heart	1.525512271	41	26.87621777
uterus	1.520697168	20	13.15186246
spinal column	1.518315496	30	19.75873926
teeth	1.508554009	19	12.59484241
heart valve	1.501496446	23	15.31805158
kidney	1.498658078	32	21.35243553
vertebrae	1.498037773	28	18.69111748
hypothalamus	1.496056241	5	3.342120344
forearm	1.493290888	25	16.74154728
esophagus	1.488439955	19	12.76504298
lips	1.484925845	21	14.14212034
coagulation system	1.484032827	20	13.47679083
wrist	1.483302975	28	18.87679083
spleen	1.481808087	13	8.773065903
inner ear	1.468855219	6	4.084813754
maxilla	1.462810547	33	22.55931232
mandible	1.459806829	33	22.60573066
jaw	1.454827952	33	22.68309456
ankle	1.454686197	28	19.24813754
cheek	1.446932007	12	8.293409742
elbow	1.443341605	27	18.70659026

spinal cord	1.436213992	29	20.19197708
scalp	1.436213992	5	3.481375358
blood vessels	1.43461997	40	27.88194842
arm	1.428594819	25	17.49971347
pelvis	1.427152705	28	19.61948424
shoulder	1.426028077	28	19.63495702
knee	1.404991948	27	19.21719198
hip	1.39935846	27	19.29455587
small intestine	1.384400184	19	13.7243553
vagina	1.382451971	12	8.680229226
mouth	1.377242627	41	29.76962751
white blood cells	1.375098503	24	17.45329513
toes	1.359034268	36	26.48939828
red blood cells	1.346450617	19	14.11117479
digit	1.344180043	37	27.5260745
diaphragm	1.342455215	7	5.214326648
fingers	1.339474189	36	26.87621777
foot	1.323022101	40	30.23381089
hand	1.322523385	38	28.73295129
neck	1.322454468	31	23.44126074
large intestine	1.312276744	20	15.24068768
chin	1.299523384	15	11.54269341
blood	1.29874454	38	29.25902579
intestine	1.29710426	23	17.73180516
outer ear	1.291301291	20	15.48825215
upper limb	1.290012567	40	31.00744986
larynx	1.287442821	10	7.767335244
ear	1.282452272	43	33.52951289
lower limb	1.274985648	42	32.94154728
ovary	1.238546909	11	8.881375358
eyelid	1.237703149	23	18.58280802
stomach	1.234133631	19	15.39541547
skull	1.232894541	38	30.8217765

nose	1.224449326	23	18.78395415
penis	1.222722723	14	11.44985673
ureter	1.219426974	12	9.840687679
vas deferens	1.211805556	3	2.475644699
hair	1.192428591	20	16.77249284
meninges	1.192428591	10	8.386246418
vulva	1.191329578	8	6.715186246
pituitary gland	1.170826624	10	8.540974212
forehead	1.157977687	16	13.81719198
peripheral nerve	1.125391561	28	24.88022923
cerebellum	1.119568387	22	19.6504298
lung	1.118293114	29	25.93237822
skin	1.109521539	40	36.05157593
urethra	1.102424386	8	7.256733524
prostate	1.098076232	7	6.3747851
peripheral nervous system	1.092914212	37	33.85444126
face	1.076562404	30	27.86647564
eye	1.043778392	37	35.44813754
cranial nerve	1.013492383	26	25.65386819
head	1.000394138	48	47.98108883
lacrimial apparatus	0.994301994	2	2.011461318
middle ear	0.986711903	8	8.10773639
brain	0.97068602	43	44.29856734
tongue	0.946459011	7	7.395988539
gallbladder	0.927698033	3	3.233810888
fallopian tube	0.916732335	2	2.181661891
urinary bladder	0.886686992	9	10.15014327
lymph nodes	0.821563089	3	3.651575931
epiglottis	0.755902101	2	2.645845272
trachea	0.751507321	4	5.322636103
thymus	0.71021571	1	1.408022923
bronchus	0.537088335	3	5.585673352
sinuses	0.529751063	1	1.887679083

olfactory bulb	0.357069777	1	2.800573066
parathyroid	0	0	1.021203438

Body Regions

Name	Enrichment ratio	Observed	Expected
pelvis	1.24410442	39	31.347851
limbs	1.227144866	42	34.22578797
thorax	1.193553082	47	39.3782235
abdomen	1.118363354	38	33.9782235
non-specific	1.02173314	51	49.91518625
head and neck	1.01110184	50	49.45100287

Body Systems

Name	Enrichment ratio	Observed	Expected
lymphatic	1.427402863	18	12.61031519
urinary	1.410402701	34	24.10659026
reproductive	1.349261579	30	22.23438395
immune	1.243624864	32	25.73123209
cardiovascular	1.227699884	42	34.21031519
endocrine	1.215985506	20	16.44756447
digestive	1.129449838	36	31.8739255
skeleton	1.107782113	41	37.01088825
integumentary	1.082120211	40	36.96446991
respiratory	1.081102012	32	29.59942693
skeletal muscle	0.999823703	39	39.00687679
nervous	0.94131205	44	46.74326648

P-value	FDR
0.165648042	0.496944125
0.307534416	0.461301624
0.163725546	0.461301624

P-value	FDR
0.199118752	0.279397738
0.007727084	0.02759673
0.013105194	0.036534587
0.033599534	0.06999903
0.192970678	0.277824633
0.023389878	0.056307021
0.005881757	0.026027335
0.082071595	0.142485409
0.003720962	0.023450096
0.026039663	0.059181053
0.041492079	0.082325554
0.001306855	0.023450096
0.002451695	0.023450096
0.002889554	0.023450096
0.075483135	0.138755764
0.016668758	0.044331803
0.002714255	0.023450096
0.003543314	0.023450096
0.080419026	0.141582792
0.003752015	0.023450096
0.003272055	0.023450096
0.004381243	0.024807576
0.001794528	0.023450096
0.005168668	0.025843338

0.001471181	0.023450096
0.005758151	0.026027335
0.069335539	0.131317308
0.097534098	0.164753544
0.005956357	0.026027335
0.004763055	0.024807576
0.136769527	0.208649923
0.002408089	0.023450096
0.002408089	0.023450096
0.035757252	0.073273058
0.105657034	0.171521159
0.062393468	0.120456266
9.26831E-05	0.011585383
0.023423721	0.056307021
0.00334776	0.023450096
0.029682393	0.063970675
0.016108329	0.043772635
0.002585532	0.023450096
0.006431826	0.026027335
0.20988651	0.279397738
0.012045483	0.036534587
0.033517574	0.06999903
0.025253972	0.058458268
0.029638817	0.063970675
0.007437398	0.027343375
0.079094275	0.141239777
0.193365945	0.277824633
0.003145521	0.023450096
0.003265951	0.023450096
0.003475738	0.023450096
0.009856429	0.031600307
0.10202331	0.167801497
0.013152451	0.036534587

0.009859296	0.031600307
0.2299403	0.29631482
0.00067696	0.023450096
0.020796196	0.051990489
0.012912093	0.036534587
0.013054994	0.036534587
0.018792118	0.048937808
0.019799197	0.050508156
0.062637258	0.120456266
0.129155677	0.201805746
0.001359019	0.023450096
0.036996025	0.074588761
0.006418309	0.026027335
0.078483134	0.141239777
0.006454779	0.026027335
0.225135472	0.296230884
0.008462112	0.028588215
0.004613626	0.024807576
0.00726274	0.027343375
0.023975173	0.056545219
0.087994028	0.150674705
0.140817944	0.212075217
0.010464611	0.032701911
0.07452259	0.138755764
0.10017792	0.1669632
0.008062692	0.027995459
0.208424372	0.279397738
0.00458401	0.024807576
0.006751862	0.026374461
0.22951062	0.29631482
0.114097015	0.182847781
0.150573323	0.224067445
0.028153401	0.062842412

0.125216209	0.198126912
0.208793926	0.279397738
0.233114096	0.297339408
0.365335866	0.430820596
0.181345044	0.266683888
0.278003251	0.34406343
0.301997789	0.362978112
0.296602836	0.359954898
0.254252283	0.32102561
0.205602879	0.279397738
0.259071451	0.323839314
0.210107099	0.279397738
0.13687435	0.208649923
0.376244416	0.43953787
0.386770996	0.447651615
0.198171756	0.279397738
0.287327122	0.352116571
0.337156525	0.401376815
0.461168069	0.524054624
0.482435607	0.999955911
0.460872341	0.524054624
0.496581981	0.554220961
0.314086796	0.999955911
0.455978121	0.999955911
0.478112389	0.999955911
0.488596253	0.999955911
0.356458285	0.999955911
0.390028769	0.999955911
0.375165954	0.999955911
0.289360383	0.999955911
0.411812031	0.999955911
0.122813737	0.999955911
0.287510249	0.999955911

0.137818792	0.999955911
0.176909622	0.999955911

P-value	FDR
0.020425754	0.040851509
0.016159744	0.040851509
0.010823877	0.040851509
0.138083612	0.207125417
0.314468159	0.377361791
0.411465353	0.411465353

P-value	FDR
0.05485941	0.131662584
0.004890451	0.058685416
0.020728102	0.082912406
0.050746661	0.131662584
0.015999256	0.082912406
0.157939928	0.236909891
0.136004718	0.233150945
0.131120268	0.233150945
0.198318382	0.26442451
0.263732151	0.316478581
0.490610384	0.99652954
0.140450216	0.99652954