

表 6. 在长寿哺乳动物中受到放松选择的显著相关基因。

Ensembl ID	Symbol	Type of Correlated Gene	K value	pvalue	Ensembl ID	Symbol	Type of Correlated Gene	K value	pvalue	Ensembl ID	Symbol	Type of Correlated Gene	K value	pvalue
ENSG00000134871	COL4A2	Positive	0.79	0	ENSG00000174684	B4GAT1	Positive	0.56	0.0001	ENSG00000173230	GOLGB1	Negative	0.62	0.006
ENSG00000187498	COL4A1	Positive	0.56	0	ENSG00000197444	OGDHL	Positive	0.84	0.0001	ENSG00000133863	TEX15	Negative	0.76	0.006
ENSG00000196431	CRYBA4	Positive	0.04	0	ENSG00000068308	OTUD5	Positive	0.76	0.0001	ENSG00000174405	LIG4	Negative	0.76	0.0072
ENSG00000143155	TIPRL	Positive	0.54	0	ENSG00000083097	DOPEY1	Negative	0.84	0.0001	ENSG00000167483	FAM129C	Negative	0.65	0.0073
ENSG00000099840	IZUMO4	Positive	0.12	0	ENSG00000231256	C17orf105	Positive	0.54	0.0002	ENSG00000136122	BORA	Negative	0.54	0.0073
ENSG00000165186	PTCHD1	Positive	0.68	0	ENSG00000196876	SCN8A	Positive	0.73	0.0002	ENSG00000103051	COG4	Positive	0.84	0.0074
ENSG00000106113	CRHR2	Positive	0.51	0	ENSG00000100053	CRYBB3	Positive	0.68	0.0002	ENSG00000203780	FANK1	Positive	0.81	0.0076
ENSG00000143401	ANP32E	Positive	0.22	0	ENSG00000139197	PEX5	Positive	0.64	0.0003	ENSG00000126895	AVPR2	Positive	0.44	0.0077
ENSG00000163638	ADAMTS9	Positive	0.79	0	ENSG00000083290	ULK2	Positive	0.84	0.0003	ENSG00000168743	NPNT	Positive	0.77	0.0077
ENSG00000170881	RNF139	Positive	0.59	0	ENSG00000084710	EFR3B	Positive	0.82	0.0003	ENSG00000155158	TTC39B	Positive	0.51	0.0078
ENSG00000171105	INSR	Positive	0.72	0	ENSG00000011677	GABRA3	Positive	0.52	0.0003	ENSG00000188783	PRELP	Positive	0.55	0.0091
ENSG000000072041	SLC6A15	Positive	0.02	0	ENSG00000187258	NPSR1	Positive	0.7	0.0004	ENSG00000188163	FAM166A	Positive	0.75	0.0094
ENSG00000077097	TOP2B	Positive	0.54	0	ENSG00000100341	PNPLA5	Positive	0.04	0.0004	ENSG00000213398	LCAT	Positive	0.68	0.0102
ENSG00000158296	SLC13A3	Positive	0	0	ENSG00000134824	FADS2	Positive	0	0.0004	ENSG00000145414	NAF1	Positive	0.8	0.0102
ENSG00000177479	ARIH2	Positive	0.51	0	ENSG00000146729	NIPSNAP2	Positive	0.56	0.0005	ENSG00000165478	HEPACAM	Positive	0.82	0.0104
ENSG00000160179	ABCG1	Positive	0.63	0	ENSG00000164082	GRM2	Positive	0.81	0.0005	ENSG00000139044	BAGALNT3	Negative	0.84	0.0108
ENSG00000119125	GDA	Positive	0	0	ENSG00000131698	SARS	Positive	0.64	0.0005	ENSG00000036054	TBC1D23	Positive	0.65	0.011
ENSG00000146904	EPHA1	Positive	0.05	0	ENSG00000174943	KCTD13	Positive	0.67	0.0005	ENSG00000185697	MYBL1	Positive	0.73	0.0111
ENSG00000173221	GLRX	Positive	0.44	0	ENSG00000124449	IRGC	Positive	0.69	0.0006	ENSG00000138111	MFS13A	Positive	0.83	0.0116
ENSG00000157219	HTR3A	Positive	0.73	0	ENSG00000142530	FAM71E1	Positive	0.69	0.0006	ENSG00000114650	SCAP	Positive	0.76	0.0118
ENSG00000101346	POFUT1	Positive	0.41	0	ENSG00000136937	NCBP1	Positive	0.81	0.0007	ENSG00000136141	LRCH1	Positive	0.9	0.0119
ENSG00000114541	FRMD4B	Positive	0.77	0	ENSG00000109689	STIM2	Positive	0.6	0.0007	ENSG00000106336	FBXO24	Negative	0.77	0.0125
ENSG00000151276	MAGI1	Positive	0.85	0	ENSG00000136449	MYCBPAP	Positive	0.71	0.0008	ENSG00000188404	SELL	Positive	0.49	0.0127
ENSG00000156453	PCDH1	Positive	0.72	0	ENSG00000148188	ANGPT1	Positive	0.2	0.0008	ENSG00000124067	SLC12A4	Negative	0	0.0129
ENSG00000178031	ADAMTS11	Positive	0.55	0	ENSG00000178788	APOLD1	Positive	0.47	0.0008	ENSG00000119314	PBP3	Positive	0.87	0.0134
ENSG00000114648	KLHL18	Positive	0.7	0	ENSG00000107295	SH3GL2	Positive	0.63	0.0008	ENSG00000113569	NUP155	Positive	0.68	0.014
ENSG00000167210	LOXHD1	Positive	0.78	0	ENSG00000119242	CCDC92	Positive	0.71	0.0009	ENSG00000136932	TRMO	Positive	0.88	0.0141
ENSG00000062194	GPBP1	Positive	0.38	0	ENSG00000142530	FAM71E1	Positive	0.81	0.0009	ENSG00000136932	TRMO	Negative	0	0.0143
ENSG00000146166	LGSN	Positive	0.75	0	ENSG00000118126	TMEM136	Positive	0.05	0.0009	ENSG00000111432	FZD10	Positive	0.74	0.0144
ENSG00000248746	ACTN3	Positive	0.8	0	ENSG00000120899	PTK2B	Positive	0.49	0.001	ENSG00000117877	CD3EAP	Negative	0.41	0.0149
ENSG00000159346	ADIPOR1	Positive	0.67	0	ENSG00000100412	ACO2	Positive	0.85	0.001	ENSG00000135968	GDC6	Positive	0.3	0.0158
ENSG00000096063	SRPK1	Positive	0.44	0	ENSG00000166268	MYRFL	Positive	0.83	0.001	ENSG00000160862	AZGP1	Positive	0.62	0.0159
ENSG00000172340	SUCLG2	Positive	0.1	0	ENSG00000092529	CAPN3	Negative	0.52	0.001	ENSG00000118508	RAB32	Positive	0.59	0.016
ENSG00000110048	OSBP	Positive	0.26	0	ENSG00000169604	ANTXR1	Positive	0.79	0.001	ENSG00000136861	CDK5RAP2	Negative	0.28	0.0169
ENSG00000183092	BEGAIN	Positive	0.47	0	ENSG00000116147	TLR	Positive	0.79	0.0011	ENSG00000244694	PTCHD4	Positive	0.67	0.0184
ENSG00000100012	SEC14L3	Positive	0.53	0	ENSG0000013441	CLK1	Positive	0.87	0.0011	ENSG00000136003	ISCU	Positive	0.79	0.0194
ENSG00000273079	GRIN2B	Positive	0.8	0	ENSG00000156787	TBC1D31	Positive	0.66	0.0012	ENSG00000198586	TLK1	Positive	0.58	0.0207
ENSG00000117399	CDC20	Positive	0.04	0	ENSG00000157119	KLHL40	Negative	0.74	0.0012	ENSG00000120798	NR2C1	Positive	0.84	0.0216
ENSG00000001460	STPG1	Positive	0.41	0	ENSG00000166004	CEP295	Positive	0.82	0.0015	ENSG00000137177	SYT7	Positive	0.5	0.0226
ENSG00000154309	DISP1	Positive	0.76	0	ENSG00000168259	DNAJC7	Negative	0	0.0016	ENSG00000137177	KIF13A	Negative	0.83	0.023
ENSG00000151012	SLC7A11	Positive	0.46	0	ENSG00000174839	DENND6A	Positive	0.75	0.0016	ENSG00000198056	PRIM1	Negative	0	0.0233
ENSG00000105370	LIM2	Positive	0.51	0	ENSG00000068120	COASY	Positive	0.75	0.0016	ENSG00000139824	GCC2	Negative	0.69	0.0249
ENSG00000107651	SEC23IP	Positive	0.68	0	ENSG00000160695	VPS11	Positive	0.76	0.0017	ENSG00000187730	GABRD	Positive	0.88	0.0252
ENSG00000138002	IFT172	Positive	0.66	0	ENSG00000146802	TMEM168	Negative	0.74	0.0017	ENSG00000198924	DCLRE1A	Negative	0.81	0.0264
ENSG00000198003	CCDC151	Positive	0.48	0	ENSG00000177181	RIMKLA	Positive	0.83	0.0018	ENSG00000178502	KLHL11	Positive	0.76	0.0267
ENSG00000131459	GFFT2	Positive	0.78	0	ENSG00000103966	EHD4	Positive	0.74	0.0019	ENSG00000161929	SCIMP	Negative	0.07	0.0278
ENSG00000185559	DLK1	Positive	0.5	0	ENSG00000197859	ADAMTS12	Positive	0.67	0.0022	ENSG00000131188	PRR7	Positive	0.79	0.0278
ENSG00000182771	GRID1	Positive	0.83	0	ENSG00000188523	CFAP77	Positive	0.81	0.0024	ENSG00000049759	NEDD4L	Positive	0.87	0.028
ENSG00000143507	DUSP10	Positive	0.43	0	ENSG00000148459	PDS51	Positive	0.67	0.0024	ENSG00000107175	CREB3	Negative	0.37	0.0288
ENSG00000134294	SLC38A2	Positive	0.26	0	ENSG00000185825	BCAP31	Positive	0.75	0.0024	ENSG00000162368	CMPK1	Positive	0.65	0.0289
ENSG00000113361	CDH6	Positive	0.61	0	ENSG00000111224	P4RP11	Positive	0.69	0.0028	ENSG00000168539	CHRM1	Positive	0.82	0.0296
ENSG00000154127	UBASH3B	Positive	0.75	0	ENSG00000124702	KLHDC3	Positive	0.72	0.003	ENSG00000169717	ACTRT2	Positive	0.82	0.0296
ENSG00000178394	HTR1A	Positive	0.5	0	ENSG00000111679	PTPN6	Positive	0.74	0.0031	ENSG00000111644	ACRBP	Positive	0.71	0.0302
ENSG00000165633	ISTM4	Positive	0.37	0	ENSG00000034053	APBA2	Positive	0.81	0.0031	ENSG00000131386	GALNT15	Negative	0.79	0.0341
ENSG00000176927	EFCAB5	Positive	0.07	0	ENSG00000112619	PRPH2	Positive	0.84	0.0031	ENSG00000066933	MYO9A	Negative	0.77	0.0354
ENSG00000125257	ABCC4	Positive	0.75	0	ENSG00000138992	MREG	Positive	0.73	0.0034	ENSG00000111602	TIMELESS	Negative	0.82	0.0361
ENSG00000146555	SDK1	Positive	0.82	0	ENSG00000118242	CNNM1	Positive	0.57	0.0034	ENSG0000010626	LRRCC23	Positive	0.57	0.037
ENSG00000138180	CEP55	Positive	0	0	ENSG00000165091	TMC1	Positive	0.61	0.0039	ENSG00000164684	ZNF704	Positive	0.86	0.0378
ENSG00000149403	GRIK4	Positive	0.78	0	ENSG00000215187	FAM166B	Positive	0.75	0.004	ENSG00000220757	WDR46	Negative	0.72	0.0386
ENSG00000170852	KBTBD2	Positive	0.68	0	ENSG00000088833	NSFL1C	Positive	0.73	0.004	ENSG00000102890	ELMO3	Positive	0.84	0.0392
ENSG00000155363	MOV10	Positive	0.72	0	ENSG00000135517	MIP	Negative	0.23	0.0042	ENSG00000105971	CAI2	Positive	0.71	0.0403
ENSG00000111581	NUP107	Positive	0.69	0	ENSG00000162236	STX3	Positive	0.75	0.0043	ENSG00000175137	SH3BP5L	Positive	0.75	0.0407
ENSG00000175084	DES	Positive	0.69	0	ENSG00000139304	PTPQR	Positive	0.81	0.0043	ENSG00000110436	SLC1A2	Positive	0.87	0.0416
ENSG00000111142	METAP2	Positive	0.54	0	ENSG00000185825	BCAP31	Positive	0.53	0.0043	ENSG00000124659	TBCC	Positive	0.23	0.0431
ENSG00000163468	CCT3	Positive	0.52	0	ENSG00000138992	TLL8	Positive	0.77	0.0044	ENSG00000095059	DHPS	Positive	0.86	0.0438
ENSG00000070961	ATP2B1	Positive	0.68	0	ENSG00000160013	PTGIR	Negative	0.5	0.0044	ENSG00000007952	NOX1	Positive	0.82	0.0444
ENSG00000116138	DNAJC16	Positive	0.22	0	ENSG00000138992	TLL8	Positive	0	0.0048	ENSG00000025293	PHF20	Negative	0.6	0.0445
ENSG00000118495	PLAGL1	Positive	0.72	0	ENSG00000092978	GPATC2H2	Positive	0.77	0.0049	ENSG00000007255	SHROOM4	Positive	0.72	0.0445
ENSG00000166448	TMEM130	Positive	0.55	0	ENSG00000163788	SNRK	Positive	0.8	0.0051	ENSG00000072506	HSD17B10	Negative	0.82	0.0449
ENSG00000166250	CLMP	Positive	0.75	0.0001	ENSG00000183671	GPR1	Negative	0.64	0.0051	ENSG00000155087	ODF1	Positive	0.1	0.0455
ENSG00000078549	ADCYAP1R1	Positive	0.74	0.0001	ENSG00000067606	PRKCZ	Positive	0.76	0.0053			Positive	0.58	0.0456
ENSG00000185522	LMNTD2	Positive	0.18	0.0001	ENSG00000131323	TRAF3	Positive	0.03	0.0055			Positive	0.76	0.0459
ENSG00000123444	KBTBD4	Positive	0.74	0.0001				0.54	0.0055					
ENSG00000157881	PANK4	Positive	0.84	0.0001				0.77	0.0057					