

Supplemental Table 4. Chromatin-state annotation of 43 FADS variants.

rsID*	Haploblock	Chromosome	Basepair†	GM12878	H1-hESC	HepG2	HMEC	HSMC	HUVEC	K562	NHEK	NHLF	Basepair‡
rs174570†	8	11	61353788	Name=4 Strong Enhancer	Name=2 Weak Promoter	Name=2 Weak Promoter	Name=2 Weak Promoter	Name=6 Weak Enhancer	Name=4 Strong Enhancer	Name=11 Weak Txn	Name=1 Active Promoter	Name=1 Active Promoter	61597212
rs174599	12	11	61378132	Name=10 Txn Elongation	Name=10 Txn Elongation	Name=10 Txn Elongation	Name=10 Txn Elongation	Name=11 Weak Txn	Name=10 Txn Elongation	Name=7 Weak Enhancer	Name=10 Txn Elongation	Name=10 Txn Elongation	61621556
rs73487492	12	11	61378187	Name=10 Txn Elongation	Name=10 Txn Elongation	Name=10 Txn Elongation	Name=10 Txn Elongation	Name=11 Weak Txn	Name=10 Txn Elongation	Name=7 Weak Enhancer	Name=10 Txn Elongation	Name=10 Txn Elongation	61621611
rs182008711	12	11	61378199	Name=10 Txn Elongation	Name=10 Txn Elongation	Name=10 Txn Elongation	Name=10 Txn Elongation	Name=11 Weak Txn	Name=10 Txn Elongation	Name=7 Weak Enhancer	Name=10 Txn Elongation	Name=10 Txn Elongation	61621623
rs11501631	12	11	61379306	Name=10 Txn Elongation	Name=10 Txn Elongation	Name=10 Txn Elongation	Name=11 Weak Txn	Name=11 Weak Txn	Name=10 Txn Elongation	Name=11 Weak Txn	Name=10 Txn Elongation	Name=10 Txn Elongation	61622730
rs556656	12	11	61379481	Name=10 Txn Elongation	Name=10 Txn Elongation	Name=10 Txn Elongation	Name=11 Weak Txn	Name=11 Weak Txn	Name=10 Txn Elongation	Name=11 Weak Txn	Name=10 Txn Elongation	Name=10 Txn Elongation	61622905
rs174601	12	11	61379716	Name=10 Txn Elongation	Name=10 Txn Elongation	Name=10 Txn Elongation	Name=11 Weak Txn	Name=11 Weak Txn	Name=10 Txn Elongation	Name=11 Weak Txn	Name=10 Txn Elongation	Name=10 Txn Elongation	61623140
rs174602†	-	11	61380990	Name=10 Txn Elongation	Name=10 Txn Elongation	Name=10 Txn Elongation	Name=11 Weak Txn	Name=11 Weak Txn	Name=10 Txn Elongation	Name=11 Weak Txn	Name=10 Txn Elongation	Name=10 Txn Elongation	61624414
rs74771917†	14	11	61384536	Name=10 Txn Elongation	Name=10 Txn Elongation	Name=11 Weak Txn	Name=7 Weak Enhancer	Name=11 Weak Txn	Name=10 Txn Elongation	Name=4 Strong Enhancer	Name=9 Txn Transition	Name=10 Txn Elongation	61627960
rs3168072†	14	11	61388086	Name=10 Txn Elongation	Name=10 Txn Elongation	Name=11 Weak Txn	Name=11 Weak Txn	Name=11 Weak Txn	Name=10 Txn Elongation	Name=11 Weak Txn	Name=10 Txn Elongation	Name=10 Txn Elongation	61631510
rs12577276†	14	11	61388886	Name=11 Weak Txn	Name=10 Txn Elongation	Name=11 Weak Txn	Name=11 Weak Txn	Name=11 Weak Txn	Name=10 Txn Elongation	Name=11 Weak Txn	Name=10 Txn Elongation	Name=10 Txn Elongation	61632310
rs174450	16	11	61398118	Name=13 Heterochrom/lo	Name=13 Heterochrom/lo	Name=13 Heterochrom/lo	Name=11 Weak Txn	Name=9 Txn Transition	Name=11 Weak Txn	Name=8 Insulator	Name=12 Repressed	Name=11 Weak Txn	61641542
rs7115739†	16	11	61398293	Name=13 Heterochrom/lo	Name=13 Heterochrom/lo	Name=8 Insulator	Name=10 Txn Elongation	Name=4 Strong Enhancer	Name=8 Insulator	Name=8 Insulator	Name=12 Repressed	Name=11 Weak Txn	61641717
rs12292968	16	11	61398871	Name=13 Heterochrom/lo	Name=13 Heterochrom/lo	Name=13 Heterochrom/lo	Name=10 Txn Elongation	Name=5 Strong Enhancer	Name=7 Weak Enhancer	Name=11 Weak Txn	Name=12 Repressed	Name=11 Weak Txn	61642295
rs191972868	16	11	61401336	Name=13 Heterochrom/lo	Name=11 Weak Txn	Name=13 Heterochrom/lo	Name=11 Weak Txn	Name=9 Txn Transition	Name=11 Weak Txn	Name=11 Weak Txn	Name=13 Heterochrom/lo	Name=10 Txn Elongation	61644760
rs7942717	16	11	61403864	Name=6 Weak Enhancer	Name=7 Weak Enhancer	Name=13 Heterochrom/lo	Name=11 Weak Txn	Name=4 Strong Enhancer	Name=10 Txn Elongation	Name=10 Txn Elongation	Name=12 Repressed	Name=10 Txn Elongation	61647288
rs115905177	16	11	61403958	Name=6 Weak Enhancer	Name=7 Weak Enhancer	Name=13 Heterochrom/lo	Name=11 Weak Txn	Name=4 Strong Enhancer	Name=10 Txn Elongation	Name=10 Txn Elongation	Name=12 Repressed	Name=10 Txn Elongation	61647382
rs174634	16	11	61403963	Name=6 Weak Enhancer	Name=7 Weak Enhancer	Name=13 Heterochrom/lo	Name=11 Weak Txn	Name=4 Strong Enhancer	Name=10 Txn Elongation	Name=10 Txn Elongation	Name=12 Repressed	Name=10 Txn Elongation	61647387
rs174635	16	11	61404003	Name=2 Weak Promoter	Name=7 Weak Enhancer	Name=13 Heterochrom/lo	Name=11 Weak Txn	Name=4 Strong Enhancer	Name=10 Txn Elongation	Name=10 Txn Elongation	Name=12 Repressed	Name=10 Txn Elongation	61647427
rs116672159	16	11	61404689	Name=6 Weak Enhancer	Name=7 Weak Enhancer	Name=13 Heterochrom/lo	Name=11 Weak Txn	Name=4 Strong Enhancer	Name=9 Txn Transition	Name=11 Weak Txn	Name=13 Heterochrom/lo	Name=11 Weak Txn	61648113
rs7930349	16	11	61405787	Name=7 Weak Enhancer	Name=6 Weak Enhancer	Name=13 Heterochrom/lo	Name=11 Weak Txn	Name=5 Strong Enhancer	Name=5 Strong Enhancer	Name=5 Strong Enhancer	Name=13 Heterochrom/lo	Name=11 Weak Txn	61649211
rs174454	16	11	61407323	Name=13 Heterochrom/lo	Name=11 Weak Txn	Name=13 Heterochrom/lo	Name=7 Weak Enhancer	Name=9 Txn Transition	Name=11 Weak Txn	Name=11 Weak Txn	Name=9 Txn Transition	Name=11 Weak Txn	61650747
rs74626285	16	11	61407747	Name=13 Heterochrom/lo	Name=11 Weak Txn	Name=13 Heterochrom/lo	Name=7 Weak Enhancer	Name=9 Txn Transition	Name=11 Weak Txn	Name=9 Txn Transition	Name=13 Heterochrom/lo	Name=9 Txn Transition	61651171
rs116139751	16	11	61409740	Name=13 Heterochrom/lo	Name=7 Weak Enhancer	Name=13 Heterochrom/lo	Name=11 Weak Txn	Name=4 Strong Enhancer	Name=11 Weak Txn	Name=9 Txn Transition	Name=13 Heterochrom/lo	Name=10 Txn Elongation	61653164
rs2524287	21	11	61441126	Name=12 Repressed	Name=3 Poised Promoter	Name=2 Weak Promoter	Name=6 Weak Enhancer	Name=2 Weak Promoter	Name=12 Repressed	Name=2 Weak Promoter	Name=12 Repressed	Name=2 Weak Promoter	61684550
rs77229376	21	11	61442367	Name=12 Repressed	Name=3 Poised Promoter	Name=12 Repressed	Name=12 Repressed	Name=12 Repressed	Name=12 Repressed	Name=3 Strong Enhancer	Name=3 Poised Promoter	Name=3 Poised Promoter	61685791
rs78156005	21	11	61442526	Name=12 Repressed	Name=12 Repressed	Name=12 Repressed	Name=12 Repressed	Name=12 Repressed	Name=12 Repressed	Name=12 Repressed	Name=12 Repressed	Name=3 Poised Promoter	61685950
rs2521561	21	11	61442565	Name=12 Repressed	Name=12 Repressed	Name=12 Repressed	Name=12 Repressed	Name=12 Repressed	Name=12 Repressed	Name=4 Strong Enhancer	Name=12 Repressed	Name=3 Poised Promoter	61685989
rs74957100	21	11	61442650	Name=12 Repressed	Name=12 Repressed	Name=12 Repressed	Name=12 Repressed	Name=12 Repressed	Name=12 Repressed	Name=4 Strong Enhancer	Name=12 Repressed	Name=3 Poised Promoter	61686074
rs2524288	21	11	61442912	Name=12 Repressed	Name=12 Repressed	Name=12 Repressed	Name=12 Repressed	Name=12 Repressed	Name=12 Repressed	Name=4 Strong Enhancer	Name=12 Repressed	Name=12 Repressed	61686336
rs76133863	21	11	61443706	Name=12 Repressed	Name=12 Repressed	Name=12 Repressed	Name=12 Repressed	Name=13 Heterochrom/lo	Name=12 Repressed	Name=4 Strong Enhancer	Name=12 Repressed	Name=3 Poised Promoter	61687130
rs11230827	21	11	61444030	Name=13 Heterochrom/lo	Name=13 Heterochrom/lo	Name=12 Repressed	Name=13 Heterochrom/lo	Name=12 Repressed	Name=12 Repressed	Name=4 Strong Enhancer	Name=12 Repressed	Name=12 Repressed	61687454

rs187943834	21	11	61444502	Name=13 Heterochrom/lo	Name=13 Heterochrom/lo	Name=3 Poised Promoter	Name=13 Heterochrom/lo	Name=13 Heterochrom/lo	Name=12 Repressed	Name=4 Strong Enhancer	Name=12 Repressed	Name=12 Repressed	61687926
rs117518711	21	11	61444591	Name=13 Heterochrom/lo	Name=13 Heterochrom/lo	Name=3 Poised Promoter	Name=13 Heterochrom/lo	Name=13 Heterochrom/lo	Name=12 Repressed	Name=4 Strong Enhancer	Name=12 Repressed	Name=12 Repressed	61688015
rs73491252	21	11	61445281	Name=13 Heterochrom/lo	Name=13 Heterochrom/lo	Name=12 Repressed	Name=13 Heterochrom/lo	Name=13 Heterochrom/lo	Name=12 Repressed	Name=5 Strong Enhancer	Name=12 Repressed	Name=13 Heterochrom/lo	61688705
rs78243280	21	11	61445498	Name=13 Heterochrom/lo	Name=13 Heterochrom/lo	Name=12 Repressed	Name=13 Heterochrom/lo	Name=13 Heterochrom/lo	Name=12 Repressed	Name=5 Strong Enhancer	Name=12 Repressed	Name=13 Heterochrom/lo	61688922
rs116985542	21	11	61445851	Name=13 Heterochrom/lo	Name=13 Heterochrom/lo	Name=12 Repressed	Name=13 Heterochrom/lo	Name=13 Heterochrom/lo	Name=12 Repressed	Name=7 Weak Enhancer	Name=12 Repressed	Name=13 Heterochrom/lo	61689275
rs190738753	21	11	61446655	Name=13 Heterochrom/lo	Name=13 Heterochrom/lo	Name=7 Weak Enhancer	Name=13 Heterochrom/lo	Name=13 Heterochrom/lo	Name=12 Repressed	Name=4 Strong Enhancer	Name=12 Repressed	Name=7 Weak Enhancer	61690079
rs2727258	21	11	61446759	Name=13 Heterochrom/lo	Name=13 Heterochrom/lo	Name=7 Weak Enhancer	Name=13 Heterochrom/lo	Name=13 Heterochrom/lo	Name=12 Repressed	Name=4 Strong Enhancer	Name=12 Repressed	Name=7 Weak Enhancer	61690183
rs12420625	21	11	61446981	Name=13 Heterochrom/lo	Name=7 Weak Enhancer	Name=6 Weak Enhancer	Name=13 Heterochrom/lo	Name=13 Heterochrom/lo	Name=12 Repressed	Name=4 Strong Enhancer	Name=12 Repressed	Name=5 Strong Enhancer	61690405
rs77071864	21	11	61446996	Name=13 Heterochrom/lo	Name=7 Weak Enhancer	Name=6 Weak Enhancer	Name=13 Heterochrom/lo	Name=13 Heterochrom/lo	Name=12 Repressed	Name=4 Strong Enhancer	Name=12 Repressed	Name=5 Strong Enhancer	61690420
rs741888	21	11	61447120	Name=13 Heterochrom/lo	Name=5 Strong Enhancer	Name=2 Weak Promoter	Name=13 Heterochrom/lo	Name=13 Heterochrom/lo	Name=12 Repressed	Name=4 Strong Enhancer	Name=12 Repressed	Name=5 Strong Enhancer	61690544
rs741887	21	11	61447283	Name=13 Heterochrom/lo	Name=5 Strong Enhancer	Name=4 Strong Enhancer	Name=13 Heterochrom/lo	Name=13 Heterochrom/lo	Name=12 Repressed	Name=4 Strong Enhancer	Name=12 Repressed	Name=5 Strong Enhancer	61690707

*137 release

†Six candidate SNPs from Fumagalli *et al.*, *Science*, 2015

‡Genomic build36

§Genomic build37

Abbreviations for cell types: GM12878 - B-lymphocyte, lymphoblastoid; H1-hESC - embryonic stem cells; HepG2 - hepatocellular carcinoma; Heterochrom/lo - Heterochromatin, low signal; HMEC - mammary epithelial cells; HSMM - skeletal muscle myoblasts; HUVEC - umbilical vein endothelial cells; K562 - leukemia; NHEK - epidermal keratinocytes; NHLF - lung fibroblasts; Txn - transcription.