

**Additional table 1**

HWE values of *FADS1* and *FADS2* and their genotype frequencies.

Gene name	SNPs	Caucasians						East Asians					
		Males			Females			Males			Females		
		HWE	Major allele	MAF	HWE	Major allele	MAF	HWE	Major allele	MAF	HWE	Major allele	MAF
<i>FADS1</i>	rs174547	0.66	T	0.34	0.48	T	0.34	0.89	C	0.44	$8.8 \times 10^{-6}$	C	0.43
	rs412334	NP	G		0.48	G	0.15	NP	G		NP	G	
	rs695867	NP	A		NP	A		NP	A		NP	A	
	rs740006	NP	A		NP	A		NP	A		NP	A	
<i>FADS2</i>	rs174570	0.80	C	0.13	0.73	C	0.15	0.90	T	0.44	$5.8 \times 10^{-5}$	T	0.43
	rs174576	0.80	C	0.37	0.73	C	0.35	0.90	A	0.43	$5.8 \times 10^{-5}$	A	0.42
	rs174579	0.80	C	0.19	0.73	C	0.21	0.97	C	0.15	0.89	C	0.14
	rs174593	0.80	T	0.27	0.73	T	0.27	0.96	T	0.14	0.97	T	0.15
	rs174602	0.80	A	0.25	0.91	A	0.23	0.82	A	0.41	0.07	A	0.37
	rs174611	0.80	T	0.30	0.73	T	0.30	NP	T		NP	T	
	rs174626	0.80	T	0.49	0.73	T	0.50	0.82	T	0.33	0.97	T	0.33
	rs174627	0.80	C	0.17	0.70	C	0.15	NP	C		NP	C	
	rs17831757	0.80	T	0.11	0.73	T	0.13	NP	T		NP	T	
	rs2072114	0.80	A	0.17	0.73	A	0.14	0.90	A	0.43	0.07	A	0.43
	rs2845573	NP	T		0.51	T	0.09	0.82	T	0.42	0.07	T	0.43
	rs2851682	0.80	A	0.11	0.70	A	0.10	0.82	A	0.43	0.07	A	0.43
	rs482548	0.92	C	0.09	0.73	C	0.10	NP	C		NP	C	
	rs498793	0.39	G	0.40	0.51	G	0.41	0.82	G	0.10	0.52	G	0.09
	rs526126	0.80	C	0.20	0.33	C	0.19	0.78	C	0.17	0.97	C	0.19
	rs968567	0.80	G	0.16	0.73	G	0.17	NP	G		NP	G	

SNPs with HWE p-values less than 0.05 are not in Hardy-Weinberg Equilibrium. Caucasian Males: n = 113; Caucasian females: n = 298; East Asian Males: n = 98; East Asian Females: n = 277. Abbreviations: HWE, Hardy-Weinberg Equilibrium p-values; MA, minor allele; MAF, minor allele frequency; NP, not polymorphic (MAF = 0).