

Supplementary Table 3. Estimates of the SNP-age at menarche association (GX) for all 122 SNPs from Perry et al. (Nature 2014; 514:92-7). *EA* : effect allele; *EAF* : effect allele frequency; R^2 : proportion of the variance of age at menarche explained by the SNP, calculated as follows: $R^2 = [2 \times EAF \times (1 - EAF) \times GX^2] / \text{varX}$, where varX is the variance of age at menarche; *F* : F statistic, a function of the magnitude and precision of the genetic effect calculated as: $F = R^2(N - 2) / (1 - R^2)$, where N is the sample size for GX (N=182,416) (Palmer et al. Stat Methods Med Res 2012; 21:223-42); *GX* : per-allele genetic effect on age at menarche (years); *GX SE* : standard error of GX; *p* : p value of GX.

SNP	Gene	EA	EAF	R^2	F	GX	GX SE	p
rs10144321	<i>DLK1</i>	a	0.75	0.0002	42	0.04	0.006	9.0E-15
rs1038903	<i>PCDH7</i>	t	0.73	0.0002	44	0.04	0.006	2.0E-11
rs10423674	<i>CRTC1</i>	a	0.34	0.0003	50	0.04	0.005	9.2E-12
rs10453225	<i>TMEM38B</i>	g	0.68	0.0014	248	0.09	0.005	5.8E-66
rs10739221	<i>TMEM38B</i>	c	0.77	0.0009	159	0.08	0.006	3.9E-41
rs10789181	<i>LEPR</i>	a	0.39	0.0002	30	0.03	0.005	3.5E-08
rs1079866	<i>INHBA</i>	g	0.15	0.0005	88	0.07	0.007	9.3E-24
rs10816359	<i>TMEM38B</i>	t	0.86	0.0001	27	0.04	0.008	1.6E-08
rs10895140	<i>TRPC6, PGR</i>	g	0.66	0.0003	50	0.04	0.005	6.7E-14
rs10938397	<i>GNPDA2</i>	a	0.57	0.0003	55	0.04	0.005	4.0E-13
rs10980854	<i>ZNF483 / OR2K2</i>	a	0.06	0.0002	28	0.06	0.011	1.3E-08
rs10980921	<i>ZNF483 / OR2K2</i>	c	0.09	0.0005	93	0.09	0.009	1.7E-23
rs11022756	<i>ARNTL, PTH</i>	a	0.29	0.0004	72	0.05	0.006	7.4E-20
rs11165924	<i>DPYD</i>	a	0.69	0.0001	27	0.03	0.006	2.2E-09
rs11215400	<i>CADM1</i>	c	0.27	0.0002	44	0.04	0.006	6.8E-11
rs1129700	<i>KCTD13, TBX6</i>	t	0.44	0.0002	31	0.03	0.005	2.3E-09
rs11578152	<i>OLFM3</i>	g	0.44	0.0002	31	0.03	0.005	4.5E-08
rs11715566	<i>IGSF11</i>	t	0.5	0.0005	88	0.05	0.005	2.4E-27
rs11767400	<i>CADPS2</i>	a	0.3	0.0003	47	0.04	0.006	4.1E-11
rs11792861	<i>TMEM245</i>	a	0.7	0.0003	47	0.04	0.005	1.7E-11
rs12148769	<i>MKRN3, MAGEL2</i>	g	0.9	0.0002	32	0.05	0.008	5.2E-11
rs12446632	<i>GPRC5B</i>	a	0.13	0.0001	25	0.04	0.007	1.3E-08
rs12472911	<i>LRP1B</i>	c	0.2	0.0002	36	0.04	0.006	6.7E-10
rs1254337	<i>SIX6</i>	t	0.31	0.0003	48	0.04	0.005	2.1E-16
rs12571664	<i>SEC23IP</i>	t	0.79	0.0002	37	0.04	0.006	3.3E-10
rs12607903	<i>DLGAP1</i>	c	0.3	0.0003	47	0.04	0.005	5.4E-11
rs12915845	<i>DET1</i>	c	0.58	0.0002	31	0.03	0.005	2.7E-12
rs13053505	<i>NPTXR, CBX7</i>	g	0.8	0.0002	36	0.04	0.007	3.0E-08
rs13067731	<i>IL20RB</i>	t	0.16	0.0002	30	0.04	0.007	1.0E-09
rs13135934	<i>SMARCA1</i>	c	0.4	0.0002	30	0.03	0.005	1.1E-10
rs13179411	<i>PHF15, TCF7</i>	t	0.17	0.0004	71	0.06	0.007	3.4E-20
rs13196561	<i>SIM1, MCHR2</i>	c	0.78	0.0002	39	0.04	0.006	8.4E-12
rs1324913	<i>KLF12</i>	g	0.65	0.0002	29	0.03	0.005	3.1E-10
rs1364063	<i>COG4, NFAT5</i>	c	0.43	0.0005	86	0.05	0.005	6.2E-21
rs1400974	<i>SATB2</i>	a	0.64	0.0004	81	0.05	0.005	8.3E-20
rs1461503	<i>BSX</i>	c	0.57	0.0005	86	0.05	0.005	2.7E-26
rs1469039	<i>KCNK9</i>	a	0.19	0.0003	54	0.05	0.007	3.5E-12

SNP	Gene	EA	EAf	R ²	F	GX	GX SE	p
rs1532331	ZNF131, GHR	g	0.32	0.0002	27	0.03	0.005	3.5E-09
rs16860328	TRA2B, IGF2BP2	g	0.42	0.0003	55	0.04	0.005	1.4E-16
rs16896742	HLA-A	g	0.38	0.0003	53	0.04	0.006	3.2E-10
rs16918254	NPBWR1	a	0.92	0.0001	26	0.05	0.009	1.4E-08
rs16918636	FSHB	t	0.79	0.0001	21	0.03	0.006	3.2E-08
rs17086188	PCSK1	a	0.94	0.0002	39	0.07	0.013	3.6E-08
rs17171818	KDM3B, BRD8	c	0.77	0.0002	40	0.04	0.006	8.9E-14
rs17233066	SATB2	c	0.93	0.0004	74	0.09	0.014	6.1E-11
rs17236969	NR4A2	t	0.14	0.0002	42	0.05	0.008	2.6E-09
rs17266097	SATB2	t	0.42	0.0003	55	0.04	0.005	3.3E-18
rs1874984	ADARB2	c	0.47	0.0003	56	0.04	0.005	1.9E-12
rs1915146	CTBP2	g	0.4	0.0002	30	0.03	0.005	3.7E-08
rs1958560	FUT8	a	0.59	0.0002	31	0.03	0.005	3.7E-08
rs2063730	GAB2, THRSP	c	0.18	0.0003	52	0.05	0.007	2.3E-12
rs2137289	SKOR2	a	0.59	0.0005	85	0.05	0.005	8.2E-20
rs2153127	LIN28B	t	0.52	0.0012	224	0.08	0.005	5.5E-59
rs2274465	KDM4A, PTPRF	c	0.66	0.0002	28	0.03	0.005	1.7E-09
rs239198	SIM1, ASCC3	t	0.46	0.0002	31	0.03	0.005	2.5E-08
rs244293	STXBP4	g	0.6	0.0002	30	0.03	0.005	4.2E-11
rs246185	MKL2	c	0.33	0.0003	50	0.04	0.006	6.8E-16
rs2479724	BYSL, FRS3	t	0.45	0.0002	31	0.03	0.005	1.2E-12
rs251130	STARD4	g	0.73	0.0002	44	0.04	0.006	2.8E-10
rs2600959	ACAD11	a	0.34	0.0003	50	0.04	0.005	4.1E-11
rs268067	BCL11A	a	0.8	0.0002	36	0.04	0.006	3.3E-08
rs2687729	EEFSEC	g	0.27	0.0002	44	0.04	0.006	1.0E-10
rs2688325	CSMD1	t	0.29	0.0001	26	0.03	0.006	2.1E-09
rs2836950	BRWD1	c	0.64	0.0002	29	0.03	0.005	6.2E-11
rs2947411	TMEM18	a	0.17	0.0004	71	0.06	0.007	1.8E-19
rs3101336	NEGR1	t	0.4	0.0003	54	0.04	0.005	5.2E-13
rs3733631	TACR3	c	0.15	0.0002	45	0.05	0.007	4.8E-13
rs3743266	RORA	t	0.68	0.0003	49	0.04	0.005	2.4E-13
rs4369815	NR4A2	t	0.93	0.0002	33	0.06	0.01	1.5E-10
rs466639	RXRG	c	0.87	0.0006	102	0.08	0.007	2.4E-24
rs4756059	PHF21A	t	0.92	0.0003	51	0.07	0.01	4.5E-13
rs4840086	SIM1, MCHR2	a	0.58	0.0003	55	0.04	0.005	9.2E-14
rs4875053	SCRIB, PARP10	g	0.44	0.0002	31	0.03	0.006	1.3E-08
rs4895808	CENPW, NCOA7	c	0.54	0.0002	31	0.03	0.005	4.8E-13
rs4929947	TRIM66	g	0.36	0.0003	52	0.04	0.005	2.6E-12
rs543874	SEC16B	a	0.8	0.0003	56	0.05	0.006	1.4E-15
rs6009583	C22orf34	c	0.74	0.0001	24	0.03	0.006	4.6E-08
rs6427782	NR5A2	a	0.51	0.0002	32	0.03	0.005	4.6E-08
rs652260	EVI5L, RETN	t	0.54	0.0002	31	0.03	0.005	9.9E-09
rs6555855	SLIT3	g	0.23	0.0002	40	0.04	0.006	2.4E-09
rs6563739	COG6	g	0.34	0.0002	28	0.03	0.005	2.3E-11
rs6747380	CCDC85A	a	0.17	0.0005	97	0.07	0.007	5.6E-28
rs6758290	GPR45	t	0.5	0.0003	56	0.04	0.005	6.6E-13

SNP	Gene	EA	EAF	R ²	F	GX	GX SE	p
rs6762477	WDR6, UBA7	g	0.44	0.0003	55	0.04	0.006	7.8E-12
rs6770162	THRB	a	0.51	0.0003	56	0.04	0.005	1.5E-12
rs6933660	ESR1	c	0.69	0.0001	27	0.03	0.005	1.3E-09
rs6938574	PTPRK	t	0.16	0.0002	30	0.04	0.007	2.4E-09
rs6964833	GTF2I	t	0.75	0.0002	42	0.04	0.006	5.3E-12
rs7037266	KDM4C	a	0.37	0.0002	29	0.03	0.005	4.7E-09
rs7103411	BDNF, LGR4	c	0.21	0.0002	37	0.04	0.006	2.6E-11
rs7104764	SIRT3	g	0.25	0.0001	24	0.03	0.006	3.7E-08
rs7138803	BCDIN3D	g	0.62	0.0003	53	0.04	0.005	1.7E-12
rs7141210	DLK1	t	0.34	0.0002	28	0.03	0.005	5.8E-09
rs7215990	WSCD1, ALOX15B	g	0.76	0.0002	41	0.04	0.006	1.9E-08
rs7463166	CSMD1	a	0.63	0.0002	29	0.03	0.005	1.3E-08
rs7514705	TNNI3K, TYW3	c	0.56	0.0003	55	0.04	0.005	1.8E-16
rs7642134	POU1F1 (PIT1)	g	0.61	0.0003	53	0.04	0.005	3.0E-16
rs7647973	WDR6, UBA7	a	0.26	0.0004	68	0.05	0.006	1.3E-16
rs7701886	GALNT10	a	0.58	0.0002	31	0.03	0.005	4.5E-08
rs7759938	LIN28B	c	0.32	0.0024	441	0.12	0.005	7.8E-110
rs7821178	PEX2	c	0.65	0.0003	51	0.04	0.005	7.3E-17
rs7828501	CSMD1	g	0.45	0.0003	56	0.04	0.005	1.2E-13
rs7853970	RMI1, NTRK2	t	0.47	0.0002	31	0.03	0.005	2.3E-09
rs7865468	PTPRD	a	0.7	0.0001	27	0.03	0.005	1.3E-07
rs7955374	VDR	t	0.13	0.0001	25	0.04	0.008	9.5E-09
rs8032675	MAP2K5	t	0.4	0.0003	54	0.04	0.005	2.1E-13
rs8050136	FTO	c	0.6	0.0003	54	0.04	0.005	1.7E-17
rs852069	PCSK2	g	0.64	0.0003	52	0.04	0.005	1.2E-13
rs889122	OLFM2, RDH8	g	0.72	0.0002	45	0.04	0.006	1.6E-13
rs900400	LEKR1, CCNL1	t	0.61	0.0002	30	0.03	0.005	2.3E-11
rs913588	KDM4C	g	0.49	0.0002	32	0.03	0.005	5.8E-11
rs929843	COG4, WWP2	a	0.23	0.0002	40	0.04	0.006	1.2E-11
rs9321659	SIM1, MCHR2	a	0.13	0.0003	57	0.06	0.008	2.5E-16
rs939317	EIF4G1	g	0.74	0.0002	43	0.04	0.006	3.0E-12
rs9447700	IMPG1	c	0.69	0.0001	27	0.03	0.005	5.6E-09
rs9475752	DST, BEND6	c	0.81	0.0002	35	0.04	0.006	8.3E-12
rs951366	NUCKS1, RAB7L1	t	0.6	0.0002	30	0.03	0.005	1.7E-08
rs9560113	TEX29	g	0.28	0.0004	71	0.05	0.006	2.1E-17
rs9635759	CA10	a	0.32	0.0004	76	0.05	0.005	1.7E-24
rs9647570	TENM2	g	0.14	0.0002	42	0.05	0.007	1.4E-11
rs9849248	ZNF654, HTR1F	c	0.15	0.0002	29	0.04	0.007	1.9E-08
rs988913	FAM83B, HCRTR2	c	0.66	0.0003	50	0.04	0.005	1.4E-12