

Supplementary Material

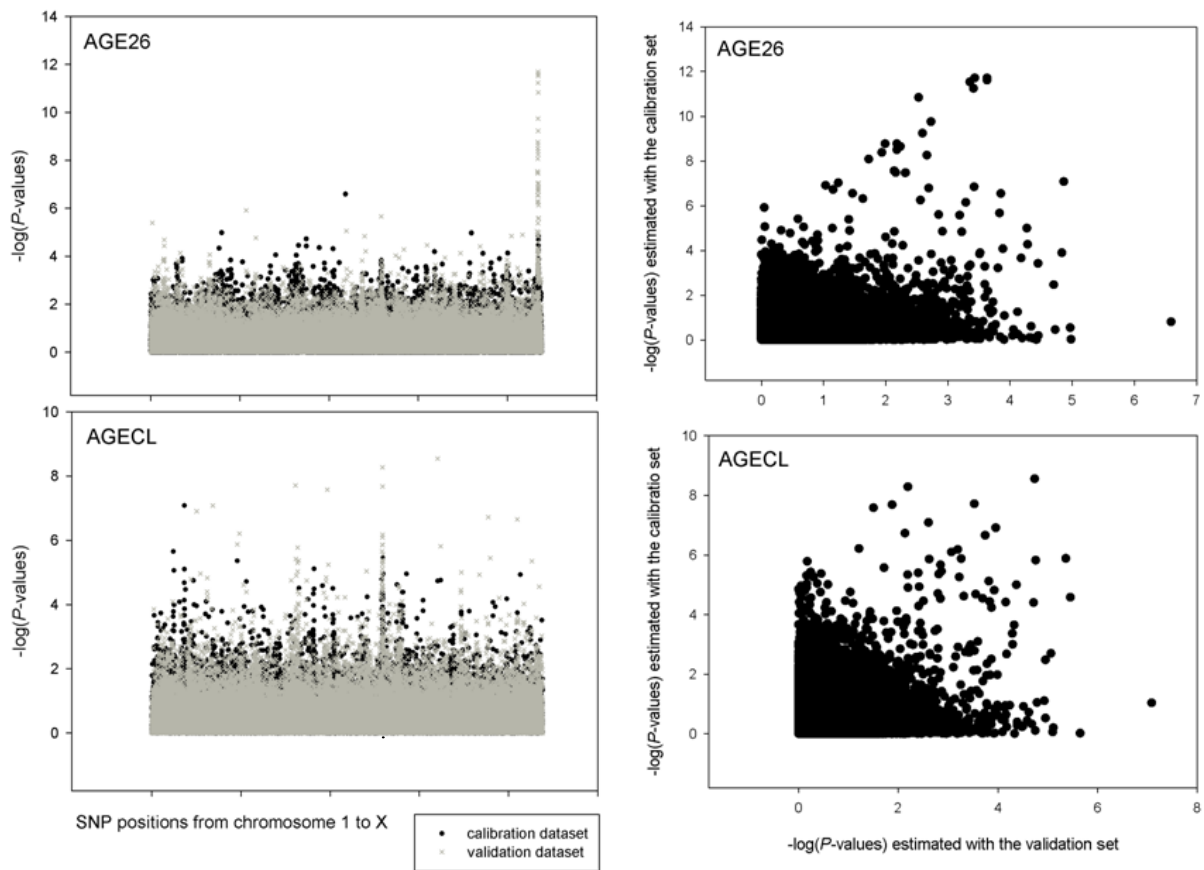


Figure S1. SNP associations results from the calibration and validation datasets for AGE26 and AGECL. Plots on the left side are Manhattan plots representing the associations between genome-wide SNP and age at a scrotal circumference of 26 cm (AGE26), as well as, SNP and age at the first *corpus luteum* (AGECL). In both Manhattan plots chromosomal positions are in the x-axis and $-\text{Log}(P\text{-values})$ are in the y-axis. Plots on the right side represent the correlation between $-\text{Log}(P\text{-values})$ estimated with the calibration datasets (in the y-axis) and $-\text{Log}(P\text{-values})$ estimated with the validation dataset (in the x-axis). Note that some SNP associations were significant in both calibration and validation datasets (detailed in supplementary Tables 1 and 2).

Table S1. SNP associated ($P < 0.01$) with AGE26 in both calibration and validation datasets.

Genetic Markers						AGE26						AGECL					
						Calibration			Validation			Calibration			Validation		
SNP	Chr	bp	dist	gene	maf	Effect	<i>P</i>	%Var.	Effect	<i>P</i>	%Var.	Effect	<i>P</i>	%Var.	Effect	<i>P</i>	%Var.
BTB-00009271	1	25,576,064	44,087	ROBO1	0.40	18.83	8.22E-04	2.73	18.10	7.00E-04	2.52	23.88	8.30E-03	3.71	4.65	5.21E-01	0.14
Hapmap52417-rs29016891	1	26,259,422	171,932	ROBO1	0.48	18.83	1.72E-03	2.84	17.19	3.05E-03	2.37	10.15	2.21E-01	0.70	-4.33	5.67E-01	0.13
ARS-BFGL-NGS-113793	2	32,770,767	0	FIGN	0.13	31.66	1.56E-04	3.63	-27.48	6.21E-04	2.73	2.24	8.62E-01	0.02	15.36	1.76E-01	0.72
ARS-BFGL-NGS-110442	2	133,112,506	0	LOC100137795	0.04	36.40	6.15E-03	1.82	35.83	9.11E-03	1.77	-4.99	7.92E-01	0.03	13.51	4.48E-01	0.21
ARS-BFGL-NGS-10134	2	134,632,287	15,972	PAX7	0.11	23.17	4.38E-03	1.65	26.87	5.02E-03	2.23	26.34	5.85E-02	1.81	14.78	3.06E-01	0.57
ARS-BFGL-NGS-20008	3	85,520,539	352,692	NFIA	0.26	16.86	9.62E-03	1.74	20.28	1.07E-03	2.51	10.84	2.81E-01	0.61	-2.23	8.28E-01	0.03
ARS-BFGL-NGS-109534	7	13,608,935	0	NFIX	0.07	34.07	4.79E-04	2.39	35.19	1.46E-03	2.55	19.36	2.61E-01	0.65	14.12	3.47E-01	0.35
ARS-BFGL-NGS-37497	7	13,745,889	0	FARSA	0.02	65.86	2.54E-04	3.36	52.38	3.32E-03	2.13	5.40	8.25E-01	0.02	36.31	9.86E-02	0.86
BTB-01570482	8	23,846,515	0	MLLT3	0.15	20.09	9.53E-03	1.61	23.12	3.79E-03	2.13	27.55	3.10E-02	2.56	-5.02	6.17E-01	0.09
ARS-BFGL-NGS-93995	9	10,453,697	152,521	B3GAT2	0.30	15.92	6.93E-03	1.69	17.18	4.54E-03	1.97	14.20	1.10E-01	1.14	2.34	7.83E-01	0.03
BTB-00511494	13	5,623,697	8,390	BTBD3	0.01	68.90	7.23E-03	2.07	112.99	1.45E-05	5.57	23.04	4.68E-01	0.20	33.85	1.40E-01	0.42
Hapmap32552-BTA-129045	14	22,323,719	0	SNTG1	0.42	17.06	1.64E-03	2.28	14.74	7.85E-03	1.70	32.71	2.79E-04	7.09	33.06	2.10E-05	7.23
ARS-BFGL-BAC-12159	14	22,587,081	82,280	PCMTD1	0.50	16.46	2.47E-03	2.17	-16.66	4.40E-03	2.23	27.10	1.41E-03	4.99	36.13	2.20E-06	8.86
ARS-BFGL-NGS-104268	14	24,057,354	58,016	RP1	0.42	20.86	1.47E-04	3.41	-27.93	2.17E-06	6.11	24.57	3.42E-03	4.00	27.49	3.69E-04	5.01
BTB-01532239	14	24,437,778	0	XKR4	0.48	14.43	8.80E-03	1.67	-16.62	2.65E-03	2.21	29.87	5.43E-04	6.05	35.40	1.36E-06	8.50
BTB-01530778	14	24,482,969	0	XKR4	0.45	15.31	5.81E-03	1.86	-17.23	1.89E-03	2.36	26.42	1.52E-04	4.70	32.57	7.72E-06	7.14
BTB-01530836	14	24,573,257	0	XKR4	0.48	14.34	9.25E-03	1.65	16.66	2.55E-03	2.23	28.98	8.53E-04	5.70	36.17	8.18E-07	8.87
BTB-00557532	14	24,643,266	32,308	XKR4	0.49	14.34	9.32E-03	1.65	-16.80	2.30E-03	2.26	29.64	6.36E-04	5.96	36.52	6.68E-07	9.04
Hapmap40120-BTA-34288	14	24,787,245	14,249	TGS1	0.46	14.30	9.79E-03	1.63	16.25	3.34E-03	2.10	27.41	1.18E-04	5.07	31.13	1.54E-05	6.54
Hapmap41234-BTA-34285	14	25,107,556	0	LOC526726	0.47	16.74	1.72E-03	2.24	-18.11	9.15E-04	2.62	21.33	1.32E-02	3.07	41.03	2.11E-08	11.38
BTB-02056709	14	25,175,950	0	SDR16C6	0.48	18.95	6.39E-04	2.88	17.08	2.01E-03	2.34	22.95	6.38E-03	3.57	42.11	5.28E-09	12.03
Hapmap46986-BTA-34282	14	25,307,116	84,125	PENK	0.50	16.80	1.84E-03	2.26	-20.49	1.48E-04	3.37	28.52	5.93E-04	5.52	33.10	5.65E-06	7.44
ARS-BFGL-NGS-529	14	25,638,580	77,701	IMPAD1	0.44	-	2.27E-04	3.13	-14.92	6.59E-03	1.76	-	2.38E-03	4.85	-	1.40E-06	8.82

						19.92						26.94			36.34			
ARS-BFGL-NGS-111395	14	25,731,992	171,113	IMPAD1	0.48	18.71	7.63E-04	2.80	14.94	5.44E-03	1.79	34.50	4.70E-05	8.07	26.96	2.27E-04	4.93	
Hapmap32434-BTC-011497	14	26,473,490	0	NSMAF	0.40	-	17.76	1.85E-03	2.44	-14.67	8.68E-03	1.66	31.67	2.53E-04	6.55	24.66	8.07E-04	3.97
Hapmap28828-BTC-011250	14	26,713,734	0	TOX	0.40	-	16.10	4.88E-03	1.99	-15.49	5.70E-03	1.84	31.49	2.94E-04	6.45	23.28	1.64E-03	3.52
Hapmap30932-BTC-011225	14	26,766,010	0	TOX	0.40	-	16.10	4.88E-03	1.99	-14.60	9.13E-03	1.64	30.83	3.83E-04	6.18	23.50	1.37E-03	3.59
Hapmap25761-BTC-065280	14	26,949,215	7,489	TOX	0.44	14.19	9.29E-03	1.59	20.34	2.30E-04	3.27	23.60	5.68E-03	3.73	23.74	9.68E-04	3.77	
BTB-01280026	14	27,035,971	94,245	TOX	0.40	16.31	4.57E-03	2.05	15.28	6.20E-03	1.80	30.91	4.48E-04	6.23	22.75	1.84E-03	3.37	
Hapmap27934-BTC-065223	14	27,155,254	213,528	TOX	0.40	15.83	5.95E-03	1.93	14.32	9.98E-03	1.58	30.19	6.29E-04	5.94	23.65	1.25E-03	3.64	
Hapmap23509-BTC-073113	14	27,198,715	256,989	TOX	0.46	-	17.20	1.13E-03	2.36	-16.87	2.44E-03	2.27	23.01	6.92E-03	3.57	27.88	1.35E-04	5.24
Hapmap23060-BTC-072978	14	27,360,366	277,183	CA8	0.40	21.36	2.54E-04	3.50	19.90	5.31E-04	3.04	24.15	6.46E-03	3.79	33.90	4.69E-06	7.46	
Hapmap26621-BTC-072953	14	27,380,992	256,557	CA8	0.39	-	18.82	1.28E-03	2.69	-20.39	3.58E-04	3.16	21.44	1.92E-02	2.96	34.81	2.72E-06	7.80
BTB-00561430	14	28,443,928	94,261	RLBP1L1	0.38	-	15.72	6.71E-03	1.88	-15.75	5.61E-03	1.88	28.11	3.13E-03	5.08	31.44	3.53E-05	6.35
ARS-BFGL-NGS-102993	17	72,987,826	14,460	SUHW2	0.50	-	16.53	2.11E-03	2.19	-16.39	2.91E-03	2.16	-6.15	4.54E-01	0.26	-6.61	3.79E-01	0.30
BTB-01134344	26	13,630,418	0	hCPEB-3	0.25	17.18	4.36E-03	1.80	20.96	6.34E-04	2.67	10.53	3.03E-01	0.57	16.67	4.88E-02	1.43	
Hapmap58550-rs29023071	26	13,738,456	0	hCPEB-3	0.20	-	16.92	7.86E-03	1.49	-18.79	4.51E-03	1.83	8.92	4.23E-01	0.35	16.31	7.66E-02	1.17
ARS-BFGL-NGS-3094	26	14,285,303	0	EXOC6	0.27	-	18.53	2.09E-03	2.16	-16.70	5.90E-03	1.75	16.47	8.15E-02	1.44	12.14	1.43E-01	0.78
ARS-BFGL-NGS-85864	26	14,532,797	68,990	CYP26A1	0.23	-	19.45	1.39E-03	2.18	-17.56	4.88E-03	1.78	4.09	6.82E-01	0.08	16.92	5.47E-02	1.40
ARS-BFGL-NGS-36382	26	14,755,039	0	FER1L3	0.24	-	19.92	9.31E-04	2.30	-20.51	1.28E-03	2.44	10.66	3.06E-01	0.56	12.06	1.62E-01	0.71
Hapmap43106-BTA-94298	26	14,814,944	0	FER1L3	0.20	-	20.39	1.15E-03	2.13	-22.64	7.48E-04	2.63	9.77	3.77E-01	0.41	15.28	1.25E-01	1.01
ARS-BFGL-NGS-21545	26	14,975,265	0	PDE6C	0.21	-	18.67	2.94E-03	1.86	-23.61	2.85E-04	2.98	3.69	7.37E-01	0.06	-7.98	3.94E-01	0.29
BTB-00706857	26	15,861,364	0	HELLS	0.29	-	15.92	7.48E-03	1.67	-17.19	3.62E-03	1.94	0.87	9.17E-01	0.00	2.62	7.55E-01	0.04
ARS-BFGL-NGS-4442	26	15,995,326	0	CYP2C18	0.28	-	17.48	3.27E-03	1.98	-18.36	2.05E-03	2.19	5.97	5.62E-01	0.20	1.58	8.50E-01	0.01
BTB-00924931	26	16,916,860	0	SORBS1	0.40	20.20	4.46E-04	3.15	14.98	6.43E-03	1.73	-3.81	6.52E-01	0.09	10.43	1.67E-01	0.71	
ARS-BFGL-NGS-117172	26	17,058,843	0	ENTPD1	0.32	-	20.19	6.01E-04	2.83	-15.47	9.92E-03	1.66	-1.11	9.09E-01	0.01	11.37	1.60E-01	0.76
ARS-BFGL-NGS-72889	26	17,851,349	0	LOC100138311	0.47	14.63	8.39E-03	1.71	16.74	2.67E-03	2.24	-0.88	9.27E-01	0.01	13.37	9.33E-02	1.21	
Hapmap46411-BTA-15820	26	20,984,335	0	CHUK	0.10	24.31	7.12E-03	1.76	23.56	8.12E-03	1.65	-7.26	6.23E-01	0.13	15.22	1.82E-01	0.58	

BTB-00933928	26	22,446,047	0	LOC616557	0.07	27.20	8.32E-03	1.59	29.63	4.83E-03	1.89	-	17.35	3.39E-01	0.55	5.87	6.93E-01	0.06	
ARS-BFGL-NGS-43159	26	22,628,269	1,763	HPS6	0.08	-	34.29	6.26E-04	2.62	-26.45	9.30E-03	1.56	9.72	5.98E-01	0.18	-	21.31	1.75E-01	0.86
ARS-BFGL-NGS-57958	26	23,000,155	0	SUFU	0.05	32.90	2.69E-03	1.78	-36.27	3.52E-03	2.17	22.72	3.39E-01	0.72	-	17.18	3.47E-01	0.41	
BTA-60935-no-rs	26	23,876,476	0	CNNM2	0.17	25.14	6.60E-04	2.85	22.78	1.86E-03	2.34	1.85	8.81E-01	0.01	3.78	7.30E-01	0.05		
ARS-BFGL-NGS-114114	26	44,573,103	0	LOC615557	0.28	18.82	1.22E-03	2.29	26.17	1.43E-05	4.42	6.42	5.11E-01	0.23	18.57	2.53E-02	1.89		
ARS-BFGL-NGS-36676	28	35,778,958	30,653	LOC786916	0.38	14.54	8.60E-03	1.60	19.18	1.57E-03	2.78	-0.76	9.37E-01	0.00	7.95	3.30E-01	0.40		
Hapmap52711-rs29025273	28	36,359,123	250,107	TSPAN14	0.36	16.56	2.14E-03	2.02	15.21	7.62E-03	1.71	-3.95	6.57E-01	0.10	16.16	4.50E-02	1.63		
ARS-BFGL-NGS-29493	29	48,978,997	0	NADSYN1	0.27	-	19.27	1.04E-03	2.33	-19.12	5.02E-03	2.30	-2.82	7.74E-01	0.04	17.24	3.65E-02	1.58	
ARS-BFGL-NGS-112783	X	62,953,985	0	LOC615793	0.08	19.34	3.24E-03	0.91	-19.41	1.31E-03	0.92	16.64	3.04E-01	0.57	-	23.33	1.95E-01	1.13	
Hapmap36634	X	63,303,299	30,702	LOC100141182	0.08	-	18.54	5.28E-03	0.83	-26.74	6.03E-05	1.74	28.14	1.19E-01	1.63	-4.20	8.08E-01	0.04	
Hapmap33089-BTA-30206	X	65,177,231	10,369	ALG13	0.17	13.15	7.29E-03	0.78	26.64	2.84E-08	3.19	-7.74	5.38E-01	0.23	25.32	2.32E-02	2.44		
BTA-24681-no-rs	X	65,614,953	165,034	TRPC5	0.07	19.58	7.59E-03	0.79	25.12	4.33E-04	1.31	-	12.96	4.24E-01	0.29	19.98	1.62E-01	0.70	
Hapmap22750-BTA-147676	X	65,919,715	180,133	LOC526223	0.14	14.40	7.66E-03	0.80	19.16	2.21E-04	1.42	-	17.78	1.72E-01	1.03	20.70	9.51E-02	1.40	
ARS-BFGL-NGS-12600	X	65,969,117	130,731	LOC526223	0.14	-	14.15	1.00E-02	0.75	-22.35	2.57E-05	1.88	17.14	2.03E-01	0.93	-	21.92	7.71E-02	1.53
Hapmap58125-rs29014921	X	68,255,455	113,239	LOC534630	0.12	17.17	2.76E-03	0.97	28.71	5.77E-07	2.72	-6.25	6.75E-01	0.11	29.53	3.22E-02	2.44		
Hapmap32855-BTA-155265	X	69,196,959	136,499	LOC518911	0.18	13.04	6.60E-03	0.80	27.81	3.22E-09	3.63	-	10.20	4.04E-01	0.41	24.09	2.66E-02	2.31	
Hapmap27896-BTA-26538	X	70,057,309	109,833	CYLC1	0.18	13.04	6.60E-03	0.80	27.81	3.22E-09	3.63	-	10.20	4.04E-01	0.41	24.09	2.66E-02	2.31	
Hapmap24863-BTA-154164	X	71,950,688	144,154	PLS3	0.18	13.32	5.78E-03	0.83	28.22	2.29E-09	3.72	-	10.20	4.04E-01	0.41	24.09	2.66E-02	2.30	
Hapmap24353-BTA-19502	X	72,447,651	268,945	LOC784663	0.18	-	13.32	5.78E-03	0.83	-28.22	2.29E-09	3.72	10.20	4.04E-01	0.41	-	24.09	2.66E-02	2.30
Hapmap43758-BTA-107826	X	73,035,611	0	LOC614223	0.14	15.01	4.76E-03	0.86	-28.85	3.41E-08	3.18	14.33	2.65E-01	0.66	11.03	3.79E-01	0.39		
Hapmap43508-BTA-20231	X	73,256,546	30,794	POU3F4	0.16	-	13.65	6.87E-03	0.79	-27.22	3.33E-08	3.16	13.21	3.04E-01	0.63	-	23.12	5.37E-02	1.93
Hapmap31832-BTA-160852	X	73,379,138	153,386	POU3F4	0.18	13.04	6.60E-03	0.80	28.41	1.74E-09	3.78	-	10.20	4.04E-01	0.41	21.64	4.77E-02	1.86	
Hapmap25915-BTA-161991	X	73,483,564	257,812	POU3F4	0.18	13.04	6.60E-03	0.79	28.41	1.74E-09	3.76	-9.91	4.24E-01	0.39	20.79	5.92E-02	1.70		
Hapmap31829-BTA-159494	X	74,552,529	116,148	LOC615291	0.14	-	14.86	4.85E-03	0.85	-28.84	3.48E-08	3.19	14.19	2.66E-01	0.66	-	15.97	2.05E-01	0.83
Hapmap26716-BTA-150917	X	75,234,781	0	APOL	0.18	13.04	6.60E-03	0.80	27.81	3.22E-09	3.63	-	10.20	4.04E-01	0.41	24.09	2.66E-02	2.31	
Hapmap32363-BTA-155726	X	75,506,946	241,844	APOL	0.18	-	13.04	6.60E-03	0.80	-27.81	3.22E-09	3.63	10.20	4.04E-01	0.41	-	24.09	2.66E-02	2.31

Hapmap31156-BTA-153166	X	77,369,290	599,379	LOC523251	0.18	13.04	6.60E-03	0.80	28.41	1.74E-09	3.78	10.20	4.04E-01	0.41	21.64	4.77E-02	1.86
Hapmap25932-BTA-30257	X	81,477,451	0	LOC512493	0.18	14.35	2.55E-03	0.97	29.06	5.89E-10	3.96	-8.27	4.96E-01	0.27	26.24	1.67E-02	2.73
Hapmap60788-rs29017234	X	82,408,727	6,068	CHIC1	0.15	15.50	2.16E-03	1.01	29.64	5.66E-09	3.68	-6.82	5.94E-01	0.16	30.40	1.06E-02	3.27
Hapmap49114-BTA-30310	X	84,335,452	19,873	CXCR3	0.15	15.40	1.86E-03	0.99	-32.35	1.80E-10	4.35	20.54	1.29E-01	1.49	-8.03	5.11E-01	0.23
Hapmap24012-BTA-158546	X	84,867,168	6,393	SNX12	0.18	16.44	4.40E-04	1.28	33.38	3.00E-12	5.27	11.57	3.36E-01	0.54	7.45	4.74E-01	0.22
Hapmap32396-BTA-164240	X	85,334,862	0	KIF4A	0.18	16.74	3.69E-04	1.31	33.36	2.01E-12	5.19	13.98	2.54E-01	0.77	10.46	3.34E-01	0.43
ARS-BFGL-NGS-98019	X	85,463,982	0	ARR3	0.17	16.86	3.86E-04	1.29	32.97	5.86E-12	4.95	11.41	3.65E-01	0.50	12.65	2.42E-01	0.62
BTA-30242-no-rs	X	85,495,447	4,439	DGAT2L3	0.17	17.38	2.33E-04	1.40	33.36	2.01E-12	5.15	16.22	1.86E-01	1.03	12.86	2.31E-01	0.65
Hapmap49950-BTA-30244	X	85,589,749	12,013	DGAT2L6	0.13	19.11	3.77E-04	1.31	28.18	1.46E-07	2.84	28.01	3.86E-02	2.38	2.09	8.73E-01	0.01
Hapmap28444-BTA-164246	X	85,712,052	0	EDA	0.11	17.95	2.02E-03	0.99	30.61	1.67E-07	2.87	22.30	1.12E-01	1.29	14.14	2.51E-01	0.52
Hapmap33084-BTA-164247	X	85,833,472	0	EDA	0.17	17.38	2.33E-04	1.39	33.47	2.50E-12	5.16	15.22	2.16E-01	0.90	12.65	2.42E-01	0.62
ARS-BFGL-NGS-21478	X	86,237,856	11,683	LOC782028	0.05	21.98	7.84E-03	0.69	37.76	5.08E-05	2.04	3.69	8.52E-01	0.02	33.88	1.85E-01	1.39
Hapmap52858-rs29015876	X	86,556,922	47,130	PJA1	0.14	15.64	2.94E-03	0.95	34.22	1.48E-11	4.55	19.57	1.34E-01	1.26	5.99	6.46E-01	0.12
Hapmap27471-BTA-28296	X	86,823,380	120,648	EFNB1	0.35	12.54	4.91E-04	1.15	-11.11	3.82E-03	0.90	7.88	4.81E-01	0.39	-3.13	7.33E-01	0.06
Hapmap31139-BTA-150843	X	87,018,049	31,313	STARD8	0.35	12.71	6.16E-04	1.18	-10.43	5.98E-03	0.79	14.66	1.30E-01	1.33	8.29	3.33E-01	0.42
Hapmap42016-BTA-96333	X	87,071,778	0	STARD8	0.09	23.11	5.96E-04	1.34	27.17	1.50E-05	1.85	37.96	1.80E-02	3.05	-6.14	6.71E-01	0.08
BTA-30085-no-rs	X	88,170,589	239,276	AR	0.50	12.42	4.33E-04	1.24	12.84	4.50E-04	1.32	10.10	2.96E-01	0.69	-1.28	8.72E-01	0.01
ARS-BFGL-NGS-2194	X	90,573,731	15,436	LOC100140878	0.25	13.71	8.83E-04	1.13	15.17	2.79E-04	1.39	0.01	9.98E-01	0.00	15.85	9.00E-02	1.28
ARS-BFGL-NGS-25590	X	90,816,210	0	RBM10	0.07	23.82	1.20E-03	1.15	-21.66	3.22E-03	0.95	22.06	1.75E-01	0.84	17.82	2.07E-01	0.55
Hapmap39671-BTA-62550	X	90,910,050	27,229	USP11	0.11	19.26	6.46E-04	1.13	-27.63	2.69E-06	2.33	20.43	1.90E-01	1.08	35.46	8.98E-03	3.25
ARS-BFGL-NGS-42972	X	91,098,633	65,673	LOC531674	0.03	39.16	3.53E-05	1.61	-37.98	3.90E-04	1.52	39.69	5.79E-02	1.40	-4.04	8.64E-01	0.01
Hapmap39370-BTA-108497	X	91,270,661	0	LOC100141016	0.10	27.27	1.36E-05	2.08	33.23	8.55E-08	3.10	12.27	4.55E-01	0.36	11.84	3.69E-01	0.33
ARS-BFGL-NGS-21779	X	91,870,138	1,138	SUV39H1	0.12	22.64	5.19E-05	1.71	23.08	5.43E-05	1.77	22.15	1.04E-01	1.38	6.20	6.05E-01	0.11
ARS-BFGL-NGS-113993	X	92,049,559	26,273	LOC100140102	0.08	26.41	5.33E-05	1.65	30.18	1.03E-05	2.15	-0.52	9.79E-01	0.00	14.52	3.27E-01	0.42
Hapmap48284-BTA-30349	X	92,260,895	0	GPKOW	0.10	25.01	1.46E-05	1.86	23.65	1.29E-04	1.66	27.89	5.54E-02	1.95	19.44	1.18E-01	0.95

BTA-30350-no-rs	X	92,373,745	0	FOXP3	0.09	24.26	6.62E-05	1.57	23.71	2.23E-04	1.50	-	15.55	2.96E-01	0.55	13.01	3.11E-01	0.38
Hapmap53698-rs29016346	X	92,552,271	34,771	PAGE4	0.11	20.64	3.06E-04	1.38	21.56	1.45E-04	1.50	-	14.49	2.79E-01	0.58	-3.77	7.37E-01	0.04
ARS-BFGL-NGS-10300	X	93,077,595	745	AKAP4	0.08	28.71	1.98E-05	1.87	20.12	3.45E-03	0.92	-	28.52	9.67E-02	1.56	14.99	2.71E-01	0.43
Hapmap47906-BTA-29386	X	93,631,688	106,632	LOC784528	0.14	19.08	1.40E-04	1.41	26.55	2.88E-07	2.74	-6.00	6.32E-01	0.12	10.13	3.43E-01	0.34	
Hapmap24388-BTA-21551	X	94,321,737	56,440	GSPT2	0.12	18.48	5.12E-04	1.18	-27.44	7.29E-07	2.60	5.81	6.60E-01	0.10	9.36	4.13E-01	0.26	
BTA-98196-no-rs	X	97,672,066	66,423	PFKFB1	0.10	17.60	1.40E-03	0.86	-31.51	2.53E-06	2.77	4.02	7.79E-01	0.04	5.15	6.90E-01	0.06	
ARS-BFGL-NGS-79062	X	100,161,904	0	MSN	0.07	26.22	5.07E-04	1.40	17.97	6.57E-03	0.66	2.91	8.69E-01	0.01	14.27	3.30E-01	0.35	
Hapmap47471-BTA-101241	X	101,743,604	3,590	ARHGEF9	0.07	27.23	1.30E-04	1.55	26.71	8.46E-05	1.49	-	12.63	4.53E-01	0.28	-1.14	9.52E-01	0.00
Hapmap28111-BTA-30368	X	103,066,682	180,765	ZNF674	0.14	18.24	3.02E-04	1.29	20.31	1.28E-04	1.60	-	10.54	4.05E-01	0.37	-6.75	5.19E-01	0.15
Hapmap58785-rs29016314	X	105,042,126	82,100	NDP	0.08	17.26	7.92E-03	0.67	18.44	8.98E-03	0.76	8.28	6.16E-01	0.13	-0.17	9.88E-01	0.00	
ARS-BFGL-NGS-16664	X	108,144,345	97,291	LOC529109	0.12	19.33	4.62E-04	1.26	19.76	5.36E-04	1.32	-9.12	4.78E-01	0.24	-7.10	5.34E-01	0.14	
ARS-BFGL-NGS-36290	X	108,208,784	32,852	LOC529109	0.15	14.84	3.61E-03	0.88	15.37	3.11E-03	0.94	-6.25	5.92E-01	0.13	-2.26	8.21E-01	0.02	

Table S2. SNP associated ($P < 0.01$) with AGECL in both calibration and validation datasets.

Genetic Markers					AGE26						AGECL						
					Calibration			Validation			Calibration			Validation			
SNP	Chr	bp	dist	gene	maf	Effect	<i>P</i>	%Var.	Effect	<i>P</i>	%Var.	Effect	<i>P</i>	%Var.	Effect	<i>P</i>	%Var.
BTA-96881-no-rs	1	38,982,951	258,261	LOC617944	0.04	6.22	6.16E-01	0.04	-10.52	5.48E-01	0.13	52.40	4.40E-03	2.66	54.01	6.31E-03	2.82
ARS-BFGL-NGS-61496	1	65,820,557	18,134	FSTL1	0.45	-1.19	8.34E-01	0.01	-5.62	3.57E-01	0.25	24.11	9.93E-03	3.90	23.49	3.67E-03	3.70
BTB-01287574	1	133,671,941	0	LOC539234	0.10	-8.56	3.67E-01	0.21	-1.40	8.94E-01	0.01	41.01	6.26E-03	4.00	33.70	4.48E-03	2.70
BTB-00061551	1	133,958,910	0	LOC539234	0.10	8.67	3.65E-01	0.21	2.18	8.35E-01	0.01	-40.18	8.36E-03	3.79	32.39	6.97E-03	2.47
Hapmap51743-BTA-54330	1	140,835,240	0	BRWD1	0.02	-4.01	8.05E-01	0.01	12.27	5.42E-01	0.10	110.97	8.64E-06	6.77	84.15	2.03E-03	3.89
ARS-BFGL-NGS-117131	2	125,677,712	18,830	MED18	0.10	0.00	1.00E+00	0.00	38.28	4.16E-01	4.40	-24.37	1.10E-04	1.51	33.77	1.25E-07	2.90
ARS-BFGL-NGS-21195	3	95,708,039	18,435	C3H1orf185	0.12	9.30	6.30E-01	0.29	31.15	1.64E-01	3.29	-21.78	2.46E-03	1.36	33.43	8.28E-08	3.21
ARS-BFGL-NGS-117339	5	7,832,521	156,772	NAV3	0.12	-2.66	9.53E-01	0.02	-37.84	4.25E-01	4.79	28.29	4.34E-06	2.26	28.39	1.33E-06	2.28
Hapmap43922-BTA-73158	5	28,736,911	0	LOC524475	0.24	10.75	9.95E-02	0.68	-4.37	5.05E-01	0.11	30.97	1.85E-03	4.77	23.42	7.24E-03	2.73

Hapmap42150-BTA-25138	5	32,819,286	70,471	ENDOU	0.45	-4.89	3.70E-01	0.19	6.62	2.43E-01	0.35	-25.05	3.57E-03	4.22	22.68	2.56E-03	3.46
ARS-BFGL-NGS-108589	5	67,408,071	204,252	STAB2	0.12	-43.89	1.92E-01	6.67	17.86	6.11E-01	1.10	-24.47	4.83E-04	1.75	24.47	2.45E-05	1.75
Hapmap59202-rs29011704	5	87,843,519	124,241	LOC540705	0.10	-22.22	6.25E-01	1.39	-33.07	3.60E-01	3.07	-35.40	1.92E-05	2.98	26.60	4.04E-05	1.68
Hapmap50164-BTA-94741	6	2,373,486	12,161	LOC786067	0.30	37.87	4.16E-01	9.60	-8.52	9.16E-01	0.49	-25.95	1.82E-03	3.81	26.73	3.60E-04	4.05
BTB-01207822	7	43,132,401	6,972	LOC788079	0.06	-18.47	7.73E-02	0.65	-8.84	4.59E-01	0.15	53.10	1.63E-03	4.52	41.18	2.99E-03	2.72
BTA-63505-no-rs	7	105,112,282	67,278	NUDT12	0.09	16.36	5.12E-01	0.74	25.50	4.74E-01	1.79	-21.40	7.76E-03	1.07	24.85	2.65E-04	1.44
ARS-BFGL-NGS-104728	8	10,680,165	0	SCARA5	0.27	-24.35	3.59E-01	3.73	-6.11	7.88E-01	0.23	26.27	7.79E-04	3.67	19.31	5.95E-03	1.98
BTB-01246594	8	42,775,660	0	SMARCA2	0.18	0.42	9.50E-01	0.00	-8.00	2.72E-01	0.31	-28.28	6.42E-03	3.25	26.82	5.83E-03	2.93
ARS-BFGL-NGS-72492	8	52,204,929	0	PCSK5	0.12	4.33	6.02E-01	0.07	7.33	3.89E-01	0.19	-40.19	1.42E-03	4.77	30.87	8.78E-03	2.82
Hapmap42118-BTA-16761	8	59,054,244	487,849	LOC785500	0.12	34.84	5.36E-01	4.07	-54.38	1.55E-01	9.91	24.50	2.97E-04	1.70	32.68	1.97E-08	3.03
ARS-BFGL-NGS-103148	10	36,572,426	4,859	DLL4	0.03	17.40	2.70E-01	0.27	-6.96	6.52E-01	0.04	81.78	2.27E-03	4.96	69.64	2.30E-03	3.59
ARS-BFGL-NGS-101229	11	98,743,962	6,497	SLC25A25	0.33	0.00	1.00E+00	0.00	507.22	1.00E+00	1827.96	-33.43	2.61E-04	6.72	21.75	7.42E-03	2.84
BTB-01886436	13	5,907,819	292,512	BTBD3	0.46	1.21	8.11E-01	0.01	-0.63	9.19E-01	0.00	-26.70	1.63E-03	4.80	27.36	3.12E-04	5.04
Hapmap23784-BTC-010226	14	13,364,466	404,776	MYC	0.46	-12.41	2.37E-02	1.23	0.38	9.45E-01	0.00	-24.00	3.88E-03	3.89	32.21	5.25E-05	7.00
BTA-122374-no-rs	14	16,435,749	0	NSMCE2	0.35	16.60	4.98E-03	2.00	-4.53	4.37E-01	0.15	26.07	6.39E-03	4.19	22.91	4.41E-03	3.23
ARS-BFGL-NGS-105832	14	21,735,604	113,336	C8orf22	0.39	-14.67	8.87E-03	1.64	-7.29	2.26E-01	0.40	-23.52	6.36E-03	3.57	34.07	1.27E-05	7.48
Hapmap27177-BTA-147405	14	21,954,567	62,207	CSF2RA	0.40	16.34	3.42E-03	2.06	13.35	1.50E-02	1.37	27.70	1.60E-03	5.00	33.11	2.00E-05	7.14
ARS-BFGL-BAC-1180	14	22,226,073	0	SNTG1	0.50	-12.99	1.98E-02	1.35	-11.96	3.92E-02	1.15	-31.81	1.46E-04	6.87	31.72	3.76E-05	6.83
Hapmap32552-BTA-129045	14	22,323,719	0	SNTG1	0.42	17.06	1.64E-03	2.28	14.74	7.85E-03	1.70	32.71	2.79E-04	7.09	33.06	2.10E-05	7.23
Hapmap50246-BTA-117246	14	22,363,637	13,578	SNTG1	0.48	11.22	4.36E-02	1.01	13.02	1.79E-02	1.36	35.39	4.26E-05	8.49	33.43	1.02E-05	7.57
ARS-BFGL-NGS-111958	14	22,392,760	42,701	SNTG1	0.48	-10.75	5.57E-02	0.93	-12.06	3.03E-02	1.17	-34.44	6.94E-05	8.05	31.01	3.86E-05	6.52
BTB-01252028	14	22,544,496	124,865	PCMTD1	0.45	-16.86	2.09E-03	2.26	-14.34	1.45E-02	1.63	-33.80	1.34E-04	7.69	30.66	5.87E-05	6.33
ARS-BFGL-BAC-12159	14	22,587,081	82,280	PCMTD1	0.50	-16.46	2.47E-03	2.17	-16.66	4.40E-03	2.23	-27.10	1.41E-03	4.99	36.13	2.20E-06	8.86
ARS-BFGL-NGS-43648	14	22,610,144	59,217	PCMTD1	0.34	-5.35	3.32E-01	0.21	-7.90	1.96E-01	0.45	-26.09	1.58E-03	4.16	25.01	1.39E-03	3.83
Hapmap31202-BTA-162588	14	23,988,778	1,415	RP1	0.44	-18.26	7.89E-04	2.64	-13.42	2.03E-02	1.43	-28.58	1.42E-03	5.47	32.58	2.97E-05	7.11
ARS-BFGL-NGS-104268	14	24,057,354	58,016	RP1	0.42	-20.86	1.47E-04	3.41	-27.93	2.17E-06	6.11	-24.57	3.42E-03	4.00	27.49	3.69E-04	5.01

ARS-BFGL-NGS-110427	14	24,326,513	97,163	XKR4	0.47	17.50	1.56E-03	2.45	11.64	3.28E-02	1.08	25.47	3.96E-03	4.39	33.95	4.04E-06	7.80
ARS-BFGL-NGS-102351	14	24,407,125	16,551	XKR4	0.50	-18.01	1.08E-03	2.60	-11.04	4.27E-02	0.98	-26.08	2.02E-04	4.62	30.64	2.91E-05	6.37
BTB-01532239	14	24,437,778	0	XKR4	0.48	-14.43	8.80E-03	1.67	-16.62	2.65E-03	2.21	-29.87	5.43E-04	6.05	35.40	1.36E-06	8.50
BTB-01530778	14	24,482,969	0	XKR4	0.45	-15.31	5.81E-03	1.86	-17.23	1.89E-03	2.36	-26.42	1.52E-04	4.70	32.57	7.72E-06	7.14
BTB-01530788	14	24,524,205	0	XKR4	0.48	-13.78	1.25E-02	1.52	-16.66	2.55E-03	2.23	-28.98	8.53E-04	5.70	36.17	8.18E-07	8.87
BTB-01530836	14	24,573,257	0	XKR4	0.48	14.34	9.25E-03	1.65	16.66	2.55E-03	2.23	28.98	8.53E-04	5.70	36.17	8.18E-07	8.87
BTB-00557532	14	24,643,266	32,308	XKR4	0.49	-14.34	9.32E-03	1.65	-16.80	2.30E-03	2.26	-29.64	6.36E-04	5.96	36.52	6.68E-07	9.04
Hapmap40120-BTA-34288	14	24,787,245	14,249	TGS1	0.46	14.30	9.79E-03	1.63	16.25	3.34E-03	2.10	27.41	1.18E-04	5.07	31.13	1.54E-05	6.54
BTB-02056709	14	25,175,950	0	SDR16C6	0.48	18.95	6.39E-04	2.88	17.08	2.01E-03	2.34	22.95	6.38E-03	3.57	42.11	5.28E-09	12.03
Hapmap46986-BTA-34282	14	25,307,116	84,125	PENK	0.50	-16.80	1.84E-03	2.26	-20.49	1.48E-04	3.37	-28.52	5.93E-04	5.52	33.10	5.65E-06	7.44
BTB-01779799	14	25,351,733	128,742	PENK	0.44	-18.75	5.20E-04	2.78	-13.15	1.60E-02	1.37	-28.01	1.53E-03	5.26	34.34	4.46E-06	7.90
ARS-BFGL-NGS-529	14	25,638,580	77,701	IMPAD1	0.44	-19.92	2.27E-04	3.13	-14.92	6.59E-03	1.76	-26.94	2.38E-03	4.85	36.34	1.40E-06	8.82
ARS-BFGL-NGS-111395	14	25,731,992	171,113	IMPAD1	0.48	18.71	7.63E-04	2.80	14.94	5.44E-03	1.79	34.50	4.70E-05	8.07	26.96	2.27E-04	4.93
Hapmap24966-BTC-054594	14	26,080,801	0	FAM110B	0.49	-13.01	2.15E-02	1.36	-17.46	1.80E-03	2.44	-34.27	3.52E-06	7.97	29.79	2.66E-05	6.02
Hapmap32434-BTC-011497	14	26,473,490	0	NSMAF	0.40	-17.76	1.85E-03	2.44	-14.67	8.68E-03	1.66	-31.67	2.53E-04	6.55	24.66	8.07E-04	3.97
ARS-BFGL-NGS-35159	14	26,508,236	12,525	NSMAF	0.41	18.51	1.23E-03	2.66	12.91	2.08E-02	1.29	34.68	5.06E-05	7.90	24.05	1.01E-03	3.80
Hapmap50665-BTA-34310	14	26,542,736	47,025	NSMAF	0.41	-17.37	2.54E-03	2.34	-11.52	4.00E-02	1.03	-35.13	5.12E-05	8.11	25.94	4.38E-04	4.42
Hapmap28828-BTC-011250	14	26,713,734	0	TOX	0.40	-16.10	4.88E-03	1.99	-15.49	5.70E-03	1.84	-31.49	2.94E-04	6.45	23.28	1.64E-03	3.52
Hapmap30932-BTC-011225	14	26,766,010	0	TOX	0.40	-16.10	4.88E-03	1.99	-14.60	9.13E-03	1.64	-30.83	3.83E-04	6.18	23.50	1.37E-03	3.59
Hapmap23524-BTC-065402	14	26,874,157	0	TOX	0.43	-11.98	3.80E-02	1.13	-11.88	3.31E-02	1.11	-31.25	3.77E-04	6.49	22.76	1.90E-03	3.44
Hapmap27935-BTC-065354	14	26,899,089	0	TOX	0.43	-11.98	3.80E-02	1.13	-11.88	3.31E-02	1.11	-31.25	3.77E-04	6.49	22.76	1.90E-03	3.44
Hapmap25761-BTC-065280	14	26,949,215	7,489	TOX	0.44	14.19	9.29E-03	1.59	20.34	2.30E-04	3.27	23.60	5.68E-03	3.73	23.74	9.68E-04	3.77
BTB-01280026	14	27,035,971	94,245	TOX	0.40	16.31	4.57E-03	2.05	15.28	6.20E-03	1.80	30.91	4.48E-04	6.23	22.75	1.84E-03	3.37
Hapmap27934-BTC-065223	14	27,155,254	213,528	TOX	0.40	15.83	5.95E-03	1.93	14.32	9.98E-03	1.58	30.19	6.29E-04	5.94	23.65	1.25E-03	3.64
Hapmap23509-BTC-073113	14	27,198,715	256,989	TOX	0.46	-17.20	1.13E-03	2.36	-16.87	2.44E-03	2.27	-23.01	6.92E-03	3.57	27.88	1.35E-04	5.24
Hapmap23060-BTC-072978	14	27,360,366	277,183	CA8	0.40	21.36	2.54E-04	3.50	19.90	5.31E-04	3.04	24.15	6.46E-03	3.79	33.90	4.69E-06	7.46
ARS-BFGL-NGS-116462	14	27,575,294	62,255	CA8	0.45	-8.09	1.56E-01	0.52	-17.55	1.84E-03	2.44	-28.53	1.35E-04	5.47	-	3.11E-03	3.10

Hapmap24928-BTC-010710	14	27,669,598	0	CA8	0.43	8.46	1.23E-01	0.56	15.39	6.44E-03	1.86	31.08	7.04E-04	6.42	21.78	2.60E-03	3.15
UA-IFASA-7947	14	27,875,890	0	RAB2A	0.39	-15.28	7.78E-03	1.77	-11.60	4.03E-02	1.02	-27.71	3.59E-03	4.94	28.10	1.95E-04	5.08
ARS-BFGL-NGS-24031	14	28,076,510	0	CHD7	0.44	-11.05	4.86E-02	0.97	-16.52	3.64E-03	2.16	-29.82	6.67E-05	5.95	22.42	2.12E-03	3.36
BTB-00560182	14	28,247,205	75,924	CHD7	0.37	14.70	1.21E-02	1.62	18.05	1.95E-03	2.44	33.30	3.54E-04	7.01	23.83	1.05E-03	3.59
BTB-02008412	14	28,300,924	129,643	CHD7	0.43	-12.77	2.65E-02	1.28	-19.66	5.91E-04	3.04	-32.04	1.11E-05	6.83	20.83	3.37E-03	2.89
BTB-00561430	14	28,443,928	94,261	RLBP1L1	0.38	-15.72	6.71E-03	1.88	-15.75	5.61E-03	1.88	-28.11	3.13E-03	5.08	31.44	3.53E-05	6.35
ARS-BFGL-NGS-21384	14	28,625,324	0	RLBP1L1	0.39	13.27	1.98E-02	1.34	13.70	1.71E-02	1.43	25.04	8.41E-03	4.05	27.81	1.80E-04	5.00
Hapmap44230-BTA-34389	14	28,647,658	0	RLBP1L1	0.39	-13.27	1.98E-02	1.34	-13.70	1.71E-02	1.43	-25.04	8.41E-03	4.05	27.81	1.80E-04	5.00
Hapmap49073-BTA-18180	14	29,161,409	253,724	NKAIN3	0.38	8.63	1.26E-01	0.56	14.69	1.05E-02	1.63	24.89	7.49E-03	3.97	25.54	4.60E-04	4.18
ARS-BFGL-NGS-93878	14	31,219,729	65,163	LOC529552	0.30	-7.73	2.06E-01	0.40	-15.19	1.00E-02	1.54	-27.37	6.37E-03	4.24	22.46	2.96E-03	2.85
Hapmap50960-BTA-43399	14	31,322,421	167,855	LOC529552	0.31	-7.68	1.87E-01	0.40	-16.38	4.99E-03	1.84	-28.58	4.44E-03	4.74	22.09	3.36E-03	2.83
Hapmap48764-BTA-44326	14	31,853,480	12,566	LOC780981	0.36	7.23	1.96E-01	0.39	7.13	1.88E-01	0.38	22.79	8.59E-03	3.26	20.52	4.77E-03	2.64
ARS-BFGL-NGS-25050	14	32,196,809	0	TRIM55	0.35	-8.83	1.23E-01	0.57	-14.93	6.28E-03	1.63	-28.16	2.40E-03	4.92	19.72	8.68E-03	2.41
ARS-BFGL-BAC-8496	14	32,663,649	35,711	RRS1	0.32	5.64	3.25E-01	0.22	16.14	4.11E-03	1.81	24.86	7.42E-03	3.64	20.66	5.20E-03	2.51
BTB-00564013	14	32,958,490	0	SGK3	0.29	8.97	1.26E-01	0.53	11.05	5.19E-02	0.81	27.98	4.41E-03	4.37	23.29	2.76E-03	3.03
Hapmap30781-BTA-129235	14	53,174,026	223,044	CSMD3	0.43	-5.71	2.99E-01	0.26	0.81	8.78E-01	0.01	-22.35	7.76E-03	3.33	20.41	6.98E-03	2.78
ARS-BFGL-BAC-23331	14	53,201,583	250,601	CSMD3	0.44	5.33	3.36E-01	0.22	-1.59	7.65E-01	0.02	22.43	7.82E-03	3.37	20.09	7.84E-03	2.70
ARS-BFGL-NGS-20320	15	6,129,665	0	MMP1	0.01	106.37	1.74E-01	3.67	507.22	1.00E+00	83.41	84.05	8.77E-03	1.94	60.80	6.83E-03	1.01
ARS-BFGL-NGS-112664	15	18,581,717	4,098	EXPH5	0.04	42.43	4.85E-01	1.96	24.32	6.26E-01	0.64	-35.07	7.29E-03	1.14	39.94	1.98E-04	1.47
BTB-00591691	15	31,074,059	139,083	TRIM29	0.03	14.34	3.68E-01	0.21	28.43	3.06E-02	0.84	65.43	2.32E-03	3.78	69.25	2.06E-03	4.24
Hapmap26360-BTA-123508	15	66,681,363	42,497	SLC1A2	0.45	12.15	2.30E-02	1.17	1.37	8.28E-01	0.01	33.33	1.65E-04	7.46	20.52	4.53E-03	2.83
BTB-01395361	15	68,231,379	320,227	C15H11orf74	0.11	7.87	4.19E-01	0.20	12.44	1.62E-01	0.49	32.35	9.15E-03	2.83	36.38	1.44E-03	3.58
ARS-BFGL-NGS-69079	15	79,785,494	10,030	LOC538864	0.26	0.00	1.00E+00	0.00	-28.77	6.21E-01	5.06	-21.69	6.85E-03	2.44	25.73	1.72E-04	3.43
ARS-BFGL-NGS-22387	18	1,751,859	0	ST3GAL2	0.20	-6.58	3.49E-01	0.22	-12.57	8.07E-02	0.80	-27.90	5.72E-03	3.35	27.79	8.42E-03	3.32
Hapmap40847-BTA-98475	18	61,438,125	37,447	LOC511982	0.17	10.60	3.71E-01	0.50	1.11	9.11E-01	0.01	25.21	1.83E-05	2.41	35.28	2.84E-09	4.72
UA-IFASA-4457	19	18,016,729	0	MYO1D	0.14	18.39	1.78E-01	1.28	7.33	7.19E-01	0.20	26.03	1.74E-05	2.18	29.67	1.53E-06	2.83

ARS-BFGL-NGS-119388	19	31,592,333	202,372	LOC539517	0.16	-8.64	2.32E-01	0.32	-23.93	2.31E-03	2.48	35.34	3.57E-03	4.58	25.72	6.89E-03	2.43
ARS-BFGL-NGS-114793	21	4,890,477	0	LOC613670	0.04	18.99	1.39E-01	0.42	-12.03	4.48E-01	0.17	67.11	3.21E-03	4.47	71.61	4.95E-04	5.09
ARS-BFGL-NGS-33260	21	8,882,276	41,084	ARRDC4	0.04	-27.11	4.71E-02	0.89	-5.68	7.18E-01	0.04	-66.50	3.18E-03	4.51	65.16	1.03E-03	4.33
BTA-106005-no-rs	22	55,586,234	23,902	LOC616071	0.36	-65.27	1.68E-01	31.44	-32.09	1.79E-01	7.60	-27.89	3.80E-03	4.86	37.76	1.18E-05	8.91
Hapmap49546-BTA-25249	23	49,260,004	0	FARS2	0.32	2.37	8.47E-01	0.04	14.44	3.99E-01	1.47	-21.72	7.30E-03	2.81	38.24	1.90E-07	8.69
ARS-BFGL-NGS-112539	24	7,753,085	0	DOK6	0.10	-4.59	9.03E-01	0.06	1.26	9.54E-01	0.00	26.66	1.35E-03	1.74	31.22	3.56E-06	2.39
ARS-BFGL-NGS-117925	27	18,638,810	0	MTUS1	0.12	-9.49	5.71E-01	0.30	-8.62	6.34E-01	0.25	21.93	3.96E-03	1.36	23.63	3.57E-04	1.58
ARS-BFGL-NGS-113093	27	22,980,780	0	DLC1	0.13	27.08	2.88E-01	2.60	42.80	9.92E-02	6.49	-26.80	1.79E-04	2.15	30.05	2.23E-07	2.71
ARS-BFGL-NGS-111019	28	28,342,445	0	LOC100138061	0.05	164.28	3.76E-02	39.35	19.66	5.56E-01	0.56	31.32	5.02E-03	1.21	31.30	1.05E-03	1.21
ARS-BFGL-NGS-33661	X	139,975,594	46,228	MID1	0.36	2.32	5.31E-01	0.04	-1.14	7.63E-01	0.01	-27.69	3.06E-04	4.80	22.79	7.61E-03	3.25