

Supplementary Table 6. GTEx eQTL support for MR instrumental variants.

(A) Selected GTEx tissue summary for direct MR SNP eQTL support.

tissue	n_direct_mr_snp_eqtl_pairs	n_unique_mr_snps	n_unique_eqtl_genes	min_p
Artery_Aorta	34	16	32	1.22E-71
Artery_Coronary	11	7	11	9.7E-27
Artery_Tibial	41	17	39	1.25E-89
Cells_Cultured_fibroblasts	33	14	32	2.46E-85
Skin_Not_Sun_Exposed_Suprapubic	39	15	38	3.3E-102
Skin_Sun_Exposed_Lower_leg	47	20	46	8.2E-127
Whole_Blood	36	19	36	7.6E-120

(B) Direct eQTL records involving the 54 MR instrumental SNPs.

rsID	variant_id	variant_id_b37	chr	variant_pref	alt	symbol	ensg_clean	gene_id	gtex_gene_name	tissue	tissue_n	tss_distanc	maf	pval_nomi	slope	slope_se	neg_log10_abs_slope
rs7428430	chr3_50136751_C_T_b38	3_50174184_C_T_b37	chr3	50136751 C	T	ACTBP13	ENSG00000234667	ENSG00000234667.1	ACTBP13	Skin_Sun_Exposed_Lower_leg	605	258771	0.480992	4.72E-29	0.36922	0.031078	28.32575 0.36922
rs7428430	chr3_50136751_C_T_b38	3_50174184_C_T_b37	chr3	50136751 C	T	ACTBP13	ENSG00000234667	ENSG00000234667.1	ACTBP13	Skin_Not_Sun_Exposed_Suprapubic	517	258771	0.489362	1.11E-18	0.355043	0.038475	17.95615 0.355043
rs17232484	chr16_89795242_G_A_b38	16_89861650_G_A_b3	chr16	89795242 G	A	AFG3L1P	ENSG00000223959	ENSG00000223959.8	AFG3L1P	Artery_Aorta	432	-177344	0.029716	7.8E-08	-0.478399	0.086968	7.108037 0.478399
rs1308048	chr1_66422859_T_C_b38	1_66888542_T_C_b37	chr1	66422859 T	C	AL139147.1	ENSG00000248458	ENSG00000248458.2	RP4-598P13.1	Cells_Cultured_fibroblasts	504	-254144	0.47205	0.000218	0.17158	0.045992	3.662173 0.17158
rs3213737	chr12_95986028_G_A_b38	12_96379806_G_A_b3	chr12	95986028 G	A	AMDHD1	ENSG00000139344	ENSG00000139344.7	AMDHD1	Artery_Aorta	432	42735	0.478036	2.81E-08	-0.332897	0.058448	7.551954 0.332897
rs3213737	chr12_95986028_G_A_b38	12_96379806_G_A_b3	chr12	95986028 G	A	AMDHD1	ENSG00000139344	ENSG00000139344.7	AMDHD1	Whole_Blood	670	42735	0.480597	2.19E-07	-0.187336	0.035728	6.659957 0.187336
rs3213737	chr12_95986028_G_A_b38	12_96379806_G_A_b3	chr12	95986028 G	A	AMDHD1	ENSG00000139344	ENSG00000139344.7	AMDHD1	Artery_Tibial	663	42735	0.483733	1.13E-06	-0.245708	0.049872	5.947345 0.245708
rs3213737	chr12_95986028_G_A_b38	12_96379806_G_A_b3	chr12	95986028 G	A	AMDHD1	ENSG00000139344	ENSG00000139344.7	AMDHD1	Artery_Coronary	240	42735	0.485915	3.47E-05	-0.316246	0.074386	4.459878 0.316246
rs7428430	chr3_50136751_C_T_b38	3_50174184_C_T_b37	chr3	50136751 C	T	AMT	ENSG00000145020	ENSG00000145020.15	AMT	Artery_Aorta	432	713998	0.498708	7.45E-05	0.11175	0.02784	4.127587 0.11175
rs7428430	chr3_50136751_C_T_b38	3_50174184_C_T_b37	chr3	50136751 C	T	AMT	ENSG00000145020	ENSG00000145020.15	AMT	Whole_Blood	670	713998	0.480597	0.000162	0.088678	0.023357	3.791572 0.088678
rs75300484	chr16_89422653_C_T_b38	16_89489061_C_T_b37	chr16	89422653 C	T	ANKRD11	ENSG00000167522	ENSG00000167522.14	ANKRD11	Whole_Blood	670	-67908	0.030597	3.95E-05	-0.210647	0.050866	4.403358 0.210647
rs7428430	chr3_50136751_C_T_b38	3_50174184_C_T_b37	chr3	50136751 C	T	APEH	ENSG00000164062	ENSG00000164062.12	APEH	Skin_Not_Sun_Exposed_Suprapubic	517	462749	0.489362	0.000165	0.090134	0.023726	3.781575 0.090134
rs6059655	chr20_34077942_A_G_b38	20_32665748_A_G_b3	chr20	34077942 A	G	ASIP	ENSG00000101440	ENSG00000101440.9	ASIP	Skin_Not_Sun_Exposed_Suprapubic	517	-116627	0.071567	1.46E-22	-0.615227	0.059581	21.8343 0.615227
rs6059655	chr20_34077942_A_G_b38	20_32665748_A_G_b3	chr20	34077942 A	G	ASIP	ENSG00000101440	ENSG00000101440.9	ASIP	Skin_Sun_Exposed_Lower_leg	605	-116627	0.07438	8.63E-20	-0.560029	0.059112	19.06385 0.560029
rs1278766	chr13_11288068_T_C_b38	13_113534382_T_C_b37	chr13	1.13E+08 T	C	ATP11A	ENSG00000068650	ENSG00000068650.18	ATP11A	Skin_Sun_Exposed_Lower_leg	605	189739	0.475207	6.29E-05	0.092583	0.022953	4.201013 0.092583
rs111515	chr6_33573730_A_G_b38	6_33541507_A_G_b37	chr6	33573730 A	G	BAK1	ENSG00000030110	ENSG00000030110.12	BAK1	Skin_Sun_Exposed_Lower_leg	605	-6563	0.304132	8.2E-127	-0.696788	0.021709	126.0845 0.696788
rs111515	chr6_33573730_A_G_b38	6_33541507_A_G_b37	chr6	33573730 A	G	BAK1	ENSG00000030110	ENSG00000030110.12	BAK1	Whole_Blood	670	-6563	0.311194	7.6E-120	-0.613438	0.020664	119.1218 0.613438
rs111515	chr6_33573730_A_G_b38	6_33541507_A_G_b37	chr6	33573730 A	G	BAK1	ENSG00000030110	ENSG00000030110.12	BAK1	Skin_Not_Sun_Exposed_Suprapubic	517	-6563	0.294971	3.3E-102	-0.735287	0.025879	101.4759 0.735287
rs111515	chr6_33573730_A_G_b38	6_33541507_A_G_b37	chr6	33573730 A	G	BAK1	ENSG00000030110	ENSG00000030110.12	BAK1	Cells_Cultured_fibroblasts	504	-6563	0.312629	2.58E-55	-0.318531	0.017384	54.58871 0.318531
rs111515	chr6_33573730_A_G_b38	6_33541507_A_G_b37	chr6	33573730 A	G	BAK1	ENSG00000030110	ENSG00000030110.12	BAK1	Artery_Tibial	663	-6563	0.302226	9.78E-33	-0.319941	0.025005	32.00973 0.319941
rs111515	chr6_33573730_A_G_b38	6_33541507_A_G_b37	chr6	33573730 A	G	BAK1	ENSG00000030110	ENSG00000030110.12	BAK1	Artery_Aorta	432	-6563	0.319121	1.97E-25	-0.307462	0.026989	24.706 0.307462
rs111515	chr6_33573730_A_G_b38	6_33541507_A_G_b37	chr6	33573730 A	G	BAK1	ENSG00000030110	ENSG00000030110.12	BAK1	Artery_Coronary	240	-6563	0.300469	2.03E-12	-0.305875	0.04036	11.6928 0.305875
rs12350739	chr9_16885019_G_A_b38	9_16885017_G_A_b37	chr9	16885019 G	A	BNC2	ENSG00000173068	ENSG00000173068.17	BNC2	Whole_Blood	670	14176	0.481343	1.59E-06	0.114296	0.023577	5.798024 0.114296
rs7428430	chr3_50136751_C_T_b38	3_50174184_C_T_b37	chr3	50136751 C	T	CDHR4	ENSG00000187492	ENSG00000187492.8	CDHR4	Artery_Tibial	663	336916	0.492295	0.000208	-0.119954	0.03211	3.68159 0.119954
rs1805008	chr16_89919736_C_T_b38	16_89986144_C_T_b37	chr16	89919736 C	T	CDK10	ENSG00000185324	ENSG00000185324.21	CDK10	Whole_Blood	670	238999	0.066418	3.89E-86	-0.658144	0.028218	85.40972 0.658144
rs1805008	chr16_89919736_C_T_b38	16_89986144_C_T_b37	chr16	89919736 C	T	CDK10	ENSG00000185324	ENSG00000185324.21	CDK10	Artery_Tibial	663	238999	0.068493	6.08E-79	-0.968348	0.042886	78.21594 0.968348
rs1805008	chr16_89919736_C_T_b38	16_89986144_C_T_b37	chr16	89919736 C	T	CDK10	ENSG00000185324	ENSG00000185324.21	CDK10	Skin_Sun_Exposed_Lower_leg	605	238999	0.066116	6.55E-57	-0.718334	0.039942	56.18355 0.718334
rs1805008	chr16_89919736_C_T_b38	16_89986144_C_T_b37	chr16	89919736 C	T	CDK10	ENSG00000185324	ENSG00000185324.21	CDK10	Cells_Cultured_fibroblasts	504	238999	0.065217	1.9E-46	-1.11684	0.068547	45.72103 1.11684
rs1805008	chr16_89919736_C_T_b38	16_89986144_C_T_b37	chr16	89919736 C	T	CDK10	ENSG00000185324	ENSG00000185324.21	CDK10	Skin_Not_Sun_Exposed_Suprapubic	517	238999	0.060928	3.04E-43	-0.688119	0.044678	42.51682 0.688119
rs1805008	chr16_89919736_C_T_b38	16_89986144_C_T_b37	chr16	89919736 C	T	CDK10	ENSG00000185324	ENSG00000185324.21	CDK10	Artery_Aorta	432	238999	0.067184	1.32E-40	-0.909778	0.058813	39.87972 0.909778
rs1805008	chr16_89919736_C_T_b38	16_89986144_C_T_b37	chr16	89919736 C	T	CDK10	ENSG00000185324	ENSG00000185324.21	CDK10	Artery_Coronary	240	238999	0.056338	5.9E-21	-0.966027	0.089902	20.22919 0.966027
rs1805007	chr16_89919709_C_T_b38	16_89986117_C_T_b37	chr16	89919709 C	T	CDK10	ENSG00000185324	ENSG00000185324.21	CDK10	Skin_Not_Sun_Exposed_Suprapubic	517	238972	0.068665	6.26E-07	-0.264394	0.052292	6.203756 0.264394
rs1805008	chr16_89919736_C_T_b38	16_89986144_C_T_b37	chr16	89919736 C	T	CENPBD1	ENSG00000177946	ENSG00000177946.5	CENPBD1	Skin_Not_Sun_Exposed_Suprapubic	517	-52049	0.060928	0.000268	0.25844	0.070339	3.572619 0.25844
rs17232484	chr16_89795242_G_A_b38	16_89861650_G_A_b3	chr16	89795242 G	A	CENPBD1	ENSG00000177946	ENSG00000177946.5	CENPBD1	Cells_Cultured_fibroblasts	504	-176543	0.032091	0.000361	-0.342753	0.095291	3.44246 0.342753
rs1805008	chr16_89919736_C_T_b38	16_89986144_C_T_b37	chr16	89919736 C	T	CHMP1A	ENSG00000131165	ENSG00000131165.14	CHMP1A	Skin_Sun_Exposed_Lower_leg	605	261935	0.066116	6.28E-10	0.279157	0.044321	9.202321 0.279157
rs141817469	chr16_89860743_C_T_b38	16_89927151_C_T_b37	chr16	89860743 C	T	CHMP1A	ENSG00000131165	ENSG00000131165.14	CHMP1A	Artery_Tibial	663	202942	0.031678	5.79E-08	0.452265	0.082133	7.237355 0.452265
rs1805007	chr16_89919709_C_T_b38	16_89986117_C_T_b37	chr16	89919709 C	T	CHMP1A	ENSG00000131165	ENSG00000131165.14	CHMP1A	Artery_Tibial	663	261908	0.075343	4.14E-06	-0.258632	0.055566	5.383127 0.258632
rs1805007	chr16_89919709_C_T_b38	16_89986117_C_T_b37	chr16	89919709 C	T	CHMP1A	ENSG00000131165										

rs1805007	chr16_89919709_C_T_b38	16_89986117_C_T_b37:chr16	89919709 C	T	FANCA	ENSG000000187741	ENSG000000187741.14	FANCA	Skin_Sun_Exposed_Lower_leg	605	103052	0.068595	2.07E-06	-0.207783	0.043295	5.684298	0.207783
rs1805007	chr16_89919709_C_T_b38	16_89986117_C_T_b37:chr16	89919709 C	T	FANCA	ENSG000000187741	ENSG000000187741.14	FANCA	Skin_Not_Sun_Exposed_Suprapubic	517	103052	0.068665	1.21E-05	-0.21556	0.048718	4.915488	0.21556
rs1805008	chr16_89919736_C_T_b38	16_89986144_C_T_b37:chr16	89919736 C	T	FANCA	ENSG000000187741	ENSG000000187741.14	FANCA	Artery_Tibial	663	103079	0.068493	0.000113	-0.323684	0.083213	3.945035	0.323684
rs7768317	chr6_41954482_C_T_b38	6_41922220_C_T_b37:chr6	41954482 C	T	FRS3	ENSG000000137218	ENSG000000137218.10	FRS3	Cells_Cultured_fibroblasts	504	174016	0.256729	4.13E-05	0.110905	0.026756	4.384558	0.110905
rs1805007	chr16_89919709_C_T_b38	16_89986117_C_T_b37:chr16	89919709 C	T	GAS8	ENSG000000141013	ENSG000000141013.16	GAS8	Skin_Sun_Exposed_Lower_leg	605	-99920	0.068595	2.73E-09	0.446968	0.073885	8.3653494	0.446968
rs1805007	chr16_89919709_C_T_b38	16_89986117_C_T_b37:chr16	89919709 C	T	GAS8	ENSG000000141013	ENSG000000141013.16	GAS8	Skin_Not_Sun_Exposed_Suprapubic	517	-99920	0.068665	3.02E-06	0.341518	0.072203	5.520599	0.341518
rs1805008	chr16_89919736_C_T_b38	16_89986144_C_T_b37:chr16	89919736 C	T	GAS8	ENSG000000141013	ENSG000000141013.16	GAS8	Artery_Tibial	663	-99893	0.068493	2.63E-05	0.287596	0.067801	4.579947	0.287596
rs142314514	chr16_90064588_A_G_b38	16_90130996_A_G_b3:chr16	90064588 A	G	GAS8	ENSG000000141013	ENSG000000141013.16	GAS8	Cells_Cultured_fibroblasts	504	44959	0.030021	0.000239	0.42951	0.115871	3.622504	0.42951
rs6059655	chr20_34077942_A_G_b38	20_32665748_A_G_b3:chr20	34077942 A	G	GGT7	ENSG000000131067	ENSG000000131067.16	GGT7	Whole_Blood	670	-794918	0.064925	9.33E-06	0.154637	0.03459	5.030249	0.154637
rs7428430	chr3_50136751_C_T_b38	3_50174184_C_T_b37:chr3	50136751 C	T	GMPPB	ENSG000000173540	ENSG000000173540.12	GMPPB	Skin_Sun_Exposed_Lower_leg	605	412800	0.480992	2.65E-12	-0.213499	0.029812	11.57665	0.213499
rs7428430	chr3_50136751_C_T_b38	3_50174184_C_T_b37:chr3	50136751 C	T	GMPPB	ENSG000000173540	ENSG000000173540.12	GMPPB	Artery_Tibial	663	412800	0.492295	6.43E-12	-0.191842	0.027273	11.19185	0.191842
rs7428430	chr3_50136751_C_T_b38	3_50174184_C_T_b37:chr3	50136751 C	T	GMPPB	ENSG000000173540	ENSG000000173540.12	GMPPB	Skin_Not_Sun_Exposed_Suprapubic	517	412800	0.489362	1.45E-11	-0.219341	0.031636	10.83969	0.219341
rs7428430	chr3_50136751_C_T_b38	3_50174184_C_T_b37:chr3	50136751 C	T	GMPPB	ENSG000000173540	ENSG000000173540.12	GMPPB	Artery_Aorta	432	412800	0.498708	8.37E-10	-0.182425	0.028819	9.077055	0.182425
rs7428430	chr3_50136751_C_T_b38	3_50174184_C_T_b37:chr3	50136751 C	T	GMPPB	ENSG000000173540	ENSG000000173540.12	GMPPB	Artery_Coronary	240	412800	0.474178	1.2E-05	-0.182484	0.040479	4.920081	0.182484
rs3213737	chr12_95986028_G_A_b38	12_96379806_G_A_b3:chr12	95986028 G	A	HAL	ENSG000000084110	ENSG000000084110.10	HAL	Skin_Sun_Exposed_Lower_leg	605	-10337	0.480992	4.03E-77	0.501557	0.022748	76.39498	0.501557
rs3213737	chr12_95986028_G_A_b38	12_96379806_G_A_b3:chr12	95986028 G	A	HAL	ENSG000000084110	ENSG000000084110.10	HAL	Skin_Not_Sun_Exposed_Suprapubic	517	-10337	0.485493	6.23E-66	0.477976	0.023414	65.20542	0.477976
rs12913832	chr15_28120472_A_G_b38	15_28365618_A_G_b3:chr15	28120472 A	G	HERC2	ENSG000000128731	ENSG000000128731.15	HERC2	Whole_Blood	670	-201680	0.33806	2.99E-15	-0.33165	0.040924	14.5239	0.33165
rs511515	chr6_33573730_A_G_b38	6_33541507_A_G_b37:chr6	33573730 A	G	HLA-DMA	ENSG000000204257	ENSG000000204257.14	HLA-DMA	Skin_Not_Sun_Exposed_Suprapubic	517	604636	0.294971	0.000186	-0.1367	0.036277	3.729524	0.1367
rs7428430	chr3_50136751_C_T_b38	3_50174184_C_T_b37:chr3	50136751 C	T	HYAL3	ENSG000000186792	ENSG000000186792.16	HYAL3	Cells_Cultured_fibroblasts	504	-162717	0.482402	5.99E-08	0.214516	0.03886	7.222444	0.214516
rs12203592	chr6_396321_C_T_b38	6_396321_C_T_b37:chr6	396321 C	T	IRF4	ENSG000000137265	ENSG000000137265.14	IRF4	Whole_Blood	670	4582	0.142537	2.08E-12	0.224244	0.031233	11.68298	0.224244
rs12203592	chr6_396321_C_T_b38	6_396321_C_T_b37:chr6	396321 C	T	IRF4	ENSG000000137265	ENSG000000137265.14	IRF4	Skin_Sun_Exposed_Lower_leg	605	4582	0.135537	1.12E-07	-0.317935	0.059111	6.949342	0.317935
rs511515	chr6_33573730_A_G_b38	6_33541507_A_G_b37:chr6	33573730 A	G	ITPR3	ENSG000000096433	ENSG000000096433.10	ITPR3	Whole_Blood	670	-46635	0.311194	8.07E-07	-0.063267	0.012688	6.093191	0.063267
rs849138	chr7_28137719_G_A_b38	7_28177338_G_A_b37:chr7	28137719 G	A	JAZF1	ENSG000000153814	ENSG000000153814.11	JAZF1	Artery_Tibial	663	-43024	0.463185	2.23E-19	0.176306	0.018811	18.65115	0.176306
rs849138	chr7_28137719_G_A_b38	7_28177338_G_A_b37:chr7	28137719 G	A	JAZF1	ENSG000000153814	ENSG000000153814.11	JAZF1	Artery_Aorta	432	-43024	0.468992	3.05E-11	0.210328	0.030536	10.5155	0.210328
rs849138	chr7_28137719_G_A_b38	7_28177338_G_A_b37:chr7	28137719 G	A	JAZF1-AS1	ENSG000000234336	ENSG000000234336.6	JAZF1-AS1	Artery_Tibial	663	-42603	0.463185	1.53E-11	0.227498	0.032969	10.81466	0.227498
rs6007506	chr22_45226133_C_T_b38	22_45622014_C_T_b37:chr22	45226133 C	T	KIAA0930	ENSG000000100364	ENSG000000100364.18	KIAA0930	Whole_Blood	670	-14636	0.35597	1.5E-25	-0.167902	0.015339	24.82285	0.167902
rs6007506	chr22_45226133_C_T_b38	22_45622014_C_T_b37:chr22	45226133 C	T	KIAA0930	ENSG000000100364	ENSG000000100364.18	KIAA0930	Artery_Aorta	432	-14636	0.355297	2.18E-08	-0.203775	0.035482	7.661631	0.203775
rs6007506	chr22_45226133_C_T_b38	22_45622014_C_T_b37:chr22	45226133 C	T	KIAA0930	ENSG000000100364	ENSG000000100364.18	KIAA0930	Skin_Sun_Exposed_Lower_leg	605	-14636	0.343802	1.51E-05	-0.113575	0.026006	4.82058	0.113575
rs9818780	chr3_156492758_T_C_b38	3_156492758_T_C_b37:chr3	1.57E+08 T	C	LEKR1	ENSG000000197980	ENSG000000197980.12	LEKR1	Artery_Tibial	663	-50512	0.460616	1.01E-06	0.222744	0.045	5.996492	0.222744
rs9818780	chr3_156774969_T_C_b38	3_156492758_T_C_b37:chr3	1.57E+08 T	C	LINC00886	ENSG000000240875	ENSG000000240875.5	LINC00886	Artery_Tibial	663	-42093	0.460616	3.95E-29	-0.463385	0.038845	28.40301	0.463385
rs9818780	chr3_156774969_T_C_b38	3_156492758_T_C_b37:chr3	1.57E+08 T	C	LINC00886	ENSG000000240875	ENSG000000240875.5	LINC00886	Artery_Aorta	432	-42093	0.45478	3.54E-28	-0.593495	0.048814	27.45043	0.593495
rs9818780	chr3_156774969_T_C_b38	3_156492758_T_C_b37:chr3	1.57E+08 T	C	LINC00886	ENSG000000240875	ENSG000000240875.5	LINC00886	Skin_Sun_Exposed_Lower_leg	605	-42093	0.444628	1.56E-24	-0.429444	0.039951	23.80784	0.429444
rs9818780	chr3_156774969_T_C_b38	3_156492758_T_C_b37:chr3	1.57E+08 T	C	LINC00886	ENSG000000240875	ENSG000000240875.5	LINC00886	Whole_Blood	670	-42093	0.460448	1.45E-19	-0.377153	0.040251	18.83799	0.377153
rs9818780	chr3_156774969_T_C_b38	3_156492758_T_C_b37:chr3	1.57E+08 T	C	LINC00886	ENSG000000240875	ENSG000000240875.5	LINC00886	Skin_Not_Sun_Exposed_Suprapubic	517	-42093	0.45648	3.44E-14	-0.36334	0.046371	13.46352	0.36334
rs9818780	chr3_156774969_T_C_b38	3_156492758_T_C_b37:chr3	1.57E+08 T	C	LINC00886	ENSG000000240875	ENSG000000240875.5	LINC00886	Artery_Coronary	240	-42093	0.448357	7.26E-08	-0.436519	0.077574	7.139266	0.436519
rs1267037	chr2_161241644_A_C_b38	2_162098155_A_C_b3:chr2	1.61E+08 A	C	LINC01806	ENSG000000227403	ENSG000000227403.1	LINC01806	Skin_Sun_Exposed_Lower_leg	605	-3095	0.238843	1.39E-14	-0.377029	0.047606	13.85852	0.377029
rs1267037	chr2_161241644_A_C_b38	2_162098155_A_C_b3:chr2	1.61E+08 A	C	LINC01806	ENSG000000227403	ENSG000000227403.1	LINC01806	Skin_Not_Sun_Exposed_Suprapubic	517	-3095	0.240812	2.3E-12	-0.366988	0.050851	11.63892	0.366988
rs1267037	chr2_161241644_A_C_b38	2_162098155_A_C_b3:chr2	1.61E+08 A	C	LINC01806	ENSG000000227403	ENSG000000227403.1	LINC01806	Whole_Blood	670	-3095	0.247015	9.35E-12	-0.327674	0.047126	11.02909	0.327674
rs111391498	chr4_1347765_A_G_b38	4_1341553_A_G_b37:chr4	1347765 A	G	MAEA	ENSG000000090316	ENSG000000090316.15	MAEA	Artery_Tibial	663	57914	0.035103	1.52E-10	-0.501427	0.076716	9.817249	0.501427
rs111391498	chr4_1347765_A_G_b38	4_1341553_A_G_b37:chr4	1347765 A	G	MAEA	ENSG000000090316	ENSG000000090316.15	MAEA	Skin_Not_Sun_Exposed_Suprapubic	517	57914	0.037718	1.65E-08	-0.572279	0.099524	7.781467	0.572279
rs111391498	chr4_1347765_A_G_b38	4_1341553_A_G_b37:chr4	1347765 A	G	MAEA	ENSG000000090316	ENSG000000090316.15	MAEA	Whole_Blood	670	57914	0.038806	2.96E-06	-0.19921	0.042218	5.529034	0.19921
rs111391498	chr4_1347765_A_G_b38	4_1341553_A_G_b37:chr4	1347765 A	G	MAEA	ENSG000000090316	ENSG000000090316.15	MAEA	Artery_Aorta	432	57914	0.037468	1E-05	-0.583286	0.129937	4.998755	0.583286
rs111391498	chr4_1347765_A_G_b38	4_1341553_A_G_b37:chr4	1347765 A	G	MAEA	ENSG000000090316	ENSG000000090316.15	MAEA	Skin_Sun_Exposed_Lower_leg	605	57914	0.038017	1.67E-05	-0.327592	0.075392	4.778429	0.327592
rs6059655	chr20_34077942_A_G_b38	20_32665748_A_G_b3:chr20	34077942 A	G	MAP1LC3A	ENSG000000101460	ENSG000000101460.12	MAP1LC3A	Whole_Blood	670	-468912	0.064925	2.62E-11	0.287525	0.042315	10.58199	0.287525
rs1805008	chr16_89919736_C_T_b38	16_89986144_C_T_b37:chr16	89919736 C	T	MC1R	ENSG000000258839	ENSG000000258839.3	MC1R	Cells_Cultured_fibroblasts	504	6108	0.065217	8.07E-05	-0.293124	0.073608	4.093305	0.293124
rs7768317	chr6_41954482_C_T_b38	6_41922220_C_T_b37:chr6	41954482 C	T	MED20	ENSG000000124641	ENSG000000124641.15	MED20	Cells_Cultured_fibroblasts	504	33343	0.256729	5.43E-11	-0.177784	0.026388	10.26501	0.177784
rs7768317	chr6_41954482_C_T_b38	6_41922220_C_T_b37:chr6	41954482 C	T	MED20	ENSG000000124641	ENSG000000124641.15	MED20	Artery_Tibial	663	33343	0.254281	6.13E-06	-0.13903	0.030426	5.121681	0.13903
rs7768317	chr6_41954482_C_T_b38	6_41922220_C_T_b37:chr6	41954482 C	T	MED20	ENSG000000124641	ENSG000000124641.15	MED20	Skin_Not_Sun_Exposed_Suprapubic	517	33343	0.263056	1.26E-05	-0.130359	0.029514	4.900399	0.130359
rs9818780	chr3_156492758_T_C_b38	3_156492758_T_C_b37:chr3	1.57E+08 T	C	MED20	ENSG000000124641	ENSG000000124641.15	MED20	Skin_Sun_Exposed_Lower_leg	605	33343	0.254545	0.000146	-0.112206	0.029327	3.836842	0.112206
rs7428430	chr3_50136751_C_T_b38	3_50174184_C_T_b37:chr3	50136751 C	T	MON1A	ENSG000000174912	ENSG000000174912.7	MON1A	Skin_Sun_Exposed_Lower_leg	605	60041	0.444628	4.39E-14	-0.399014	0.051431	13.35773	0.399014
rs7428430	chr3_50136751_C_T_b38	3_50174184_C_T_b37:chr3	50136751 C	T	M												

rs6059655	chr20_34077942_A_G_b38	20_32665748_A_G_b3	chr20	34077942 A	G	RP5-1125A11.7	ENSG000000276073	ENSG000000276073.1	RP5-1125A11.7	Skin_Not_Sun_Exposed_Suprapubic	517	88953	0.071567	2.27E-05	-0.343041	0.080108	4.644731	0.343041
rs6059655	chr20_34077942_A_G_b38	20_32665748_A_G_b3	chr20	34077942 A	G	RP5-1125A11.7	ENSG000000276073	ENSG000000276073.1	RP5-1125A11.7	Artery_Aorta	432	88953	0.076227	2.27E-05	-0.455783	0.105983	4.643718	0.455783
rs6059655	chr20_34077942_A_G_b38	20_32665748_A_G_b3	chr20	34077942 A	G	RP5-1125A11.7	ENSG000000276073	ENSG000000276073.1	RP5-1125A11.7	Cells_Cultured_fibroblasts	504	88953	0.052795	0.000125	-0.384487	0.099262	3.904026	0.384487
rs7428430	chr3_50136751_C_T_b38	3_50174184_C_T_b37	chr3	50136751 C	T	SEMA3F	ENSG000000001617	ENSG000000001617.11	SEMA3F	Artery_Aorta	432	-18294	0.498708	5.78E-06	-0.181308	0.039309	5.237845	0.181308
rs1308048	chr1_66422859_T_C_b38	1_66888542_T_C_b37	chr1	66422859 T	C	SGIP1	ENSG000000118473	ENSG000000118473.21	SGIP1	Cells_Cultured_fibroblasts	504	-110524	0.47205	2.39E-12	0.263206	0.036416	11.62137	0.263206
rs7428430	chr3_50136751_C_T_b38	3_50174184_C_T_b37	chr3	50136751 C	T	SLC38A3	ENSG000000188338	ENSG000000188338.14	SLC38A3	Skin_Sun_Exposed_Lower_leg	605	-68495	0.480992	0.001031	-0.135731	0.041128	2.986944	0.135731
rs6689641	chr1_11017778_A_G_b38	1_110720400_A_G_b3	chr1	1.1E+08 A	G	SLC6A17	ENSG000000197106	ENSG000000197106.6	SLC6A17	Skin_Sun_Exposed_Lower_leg	605	27292	0.496683	2.83E-06	0.165229	0.034909	5.547589	0.165229
rs141817469	chr16_89960743_C_T_b38	16_89927151_C_T_b37	chr16	89860743 C	T	SPATA2L	ENSG000000158792	ENSG000000158792.15	SPATA2L	Whole_Blood	670	159038	0.033582	0.000123	0.214293	0.055435	3.910522	0.214293
rs1805007	chr16_89919709_C_T_b38	16_89986117_C_T_b37	chr16	89919709 C	T	SPATA33	ENSG000000167523	ENSG000000167523.13	SPATA33	Whole_Blood	670	261863	0.070896	1.94E-07	-0.320934	0.060935	6.71292	0.320934
rs1805007	chr16_89919709_C_T_b38	16_89986117_C_T_b37	chr16	89919709 C	T	SPIRE2	ENSG000000204991	ENSG000000204991.10	SPIRE2	Skin_Sun_Exposed_Lower_leg	605	101530	0.068595	4.26E-05	-0.30258	0.073316	4.370472	0.30258
rs1805007	chr16_89919709_C_T_b38	16_89986117_C_T_b37	chr16	89919709 C	T	SPIRE2	ENSG000000204991	ENSG000000204991.10	SPIRE2	Artery_Tibial	663	101530	0.075343	4.38E-05	-0.351418	0.085258	4.35832	0.351418
rs1805008	chr16_89919736_C_T_b38	16_89986144_C_T_b37	chr16	89919736 C	T	SPIRE2	ENSG000000204991	ENSG000000204991.11	SPIRE2	Artery_Aorta	432	101557	0.067184	5.75E-05	-0.479142	0.117498	4.240075	0.479142
rs1805007	chr16_89919709_C_T_b38	16_89986117_C_T_b37	chr16	89919709 C	T	SPIRE2	ENSG000000204991	ENSG000000204991.10	SPIRE2	Artery_Aorta	432	101530	0.073643	5.82E-05	-0.444904	0.109183	4.234723	0.444904
rs7794036	chr7_105230001_T_C_b38	7_104870448_T_C_b37	chr7	1.05E+08 T	C	SRPK2	ENSG000000135250	ENSG000000135250.16	SRPK2	Whole_Blood	670	-169307	0.5	5.21E-24	-0.182147	0.017255	23.28297	0.182147
rs7794036	chr7_105230001_T_C_b38	7_104870448_T_C_b37	chr7	1.05E+08 T	C	SRPK2	ENSG000000135250	ENSG000000135250.16	SRPK2	Artery_Aorta	432	-169307	0.492248	6.88E-10	-0.218417	0.034322	9.162111	0.218417
rs7794036	chr7_105230001_T_C_b38	7_104870448_T_C_b37	chr7	1.05E+08 T	C	SRPK2	ENSG000000135250	ENSG000000135250.16	SRPK2	Artery_Tibial	663	-169307	0.493151	9.32E-08	-0.154626	0.028544	7.030666	0.154626
rs511515	chr6_33573730_A_G_b38	6_33541507_A_G_b37	chr6	33573730 A	G	TAPBP	ENSG000000231925	ENSG000000231925.11	TAPBP	Artery_Tibial	663	259343	0.302226	3.73E-08	-0.166953	0.029876	7.428683	0.166953
rs511515	chr6_33573730_A_G_b38	6_33541507_A_G_b37	chr6	33573730 A	G	TAPBP	ENSG000000231925	ENSG000000231925.11	TAPBP	Whole_Blood	670	259343	0.311194	4.46E-06	0.070611	0.015247	5.35069	0.070611
rs511515	chr6_33573730_A_G_b38	6_33541507_A_G_b37	chr6	33573730 A	G	TAPBP	ENSG000000231925	ENSG000000231925.11	TAPBP	Skin_Sun_Exposed_Lower_leg	605	259343	0.304132	1.1E-05	-0.107855	0.024301	4.958071	0.107855
rs1805008	chr16_89919736_C_T_b38	16_89986144_C_T_b37	chr16	89919736 C	T	TCF25	ENSG000000141002	ENSG000000141002.19	TCF25	Artery_Tibial	663	46166	0.068493	2.36E-06	0.183227	0.038383	5.626751	0.183227
rs1308048	chr1_66422859_T_C_b38	1_66888542_T_C_b37	chr1	66422859 T	C	TCTEX1D1	ENSG000000152760	ENSG000000152760.9	TCTEX1D1	Cells_Cultured_fibroblasts	504	-329601	0.47205	7.59E-07	0.249119	0.049598	6.119553	0.249119
rs9818780	chr1_156492758_T_C_b38	1_156492758_T_C_b37	chr1	1.57E+08 T	C	TIPARP	ENSG000000163659	ENSG000000163659.12	TIPARP	Artery_Tibial	663	101734	0.460616	7.17E-06	-0.147727	0.032574	5.144343	0.147727
rs11104733	chr12_88096342_C_T_b38	12_88490119_C_T_b37	chr12	88096342 C	T	TMTC3	ENSG000000139324	ENSG000000139324.11	TMTC3	Skin_Not_Sun_Exposed_Suprapubic	517	-45954	0.024178	2.31E-10	0.398077	0.061355	9.636266	0.398077
rs11104733	chr12_88096342_C_T_b38	12_88490119_C_T_b37	chr12	88096342 C	T	TMTC3	ENSG000000139324	ENSG000000139324.11	TMTC3	Skin_Sun_Exposed_Lower_leg	605	-45954	0.016529	4.02E-08	0.385328	0.069169	7.395581	0.385328
rs11104733	chr12_88096342_C_T_b38	12_88490119_C_T_b37	chr12	88096342 C	T	TMTC3	ENSG000000139324	ENSG000000139324.11	TMTC3	Cells_Cultured_fibroblasts	504	-45954	0.019669	6.79E-08	0.422185	0.076807	7.16827	0.422185
rs11104733	chr12_88096342_C_T_b38	12_88490119_C_T_b37	chr12	88096342 C	T	TMTC3	ENSG000000139324	ENSG000000139324.11	TMTC3	Artery_Tibial	663	-45954	0.018836	3.82E-07	0.42877	0.083342	6.418152	0.42877
rs11104733	chr12_88096342_C_T_b38	12_88490119_C_T_b37	chr12	88096342 C	T	TMTC3	ENSG000000139324	ENSG000000139324.11	TMTC3	Artery_Aorta	432	-45954	0.021964	5.85E-07	0.456383	0.089482	6.232947	0.456383
rs6059655	chr20_34077942_A_G_b38	20_32665748_A_G_b3	chr20	34077942 A	G	TP53INP2	ENSG000000078804	ENSG000000078804.12	TP53INP2	Cells_Cultured_fibroblasts	504	-626348	0.052795	0.000275	0.196522	0.053561	3.560251	0.196522
rs150527451	chr11_68817897_G_A_b38	11_68817897_G_A_b37	chr11	69050429 G	A	TPCN2	ENSG000000162341	ENSG000000162341.16	TPCN2	Skin_Sun_Exposed_Lower_leg	605	1532	0.100826	6.38E-05	0.219063	0.054353	4.195412	0.219063
rs11070811	chr15_31101879_C_T_b38	15_31394082_C_T_b37	chr15	31101879 C	T	TRPM1	ENSG000000134160	ENSG000000134160.13	TRPM1	Skin_Sun_Exposed_Lower_leg	605	-59394	0.207438	6.06E-18	0.342938	0.038337	17.21763	0.342938
rs11070811	chr15_31101879_C_T_b38	15_31394082_C_T_b37	chr15	31101879 C	T	TRPM1	ENSG000000134160	ENSG000000134160.13	TRPM1	Skin_Not_Sun_Exposed_Suprapubic	517	-59394	0.217602	4.92E-11	-0.321543	0.047712	10.30782	0.321543
rs7428430	chr3_50136751_C_T_b38	3_50174184_C_T_b37	chr3	50136751 C	T	UBA7	ENSG000000182179	ENSG000000182179.12	UBA7	Whole_Blood	670	322805	0.480597	1.16E-30	0.204733	0.016806	29.93592	0.204733
rs7428430	chr3_50136751_C_T_b38	3_50174184_C_T_b37	chr3	50136751 C	T	UBA7	ENSG000000182179	ENSG000000182179.12	UBA7	Skin_Not_Sun_Exposed_Suprapubic	517	322805	0.489362	2.05E-14	0.193069	0.024411	13.68827	0.193069
rs7428430	chr3_50136751_C_T_b38	3_50174184_C_T_b37	chr3	50136751 C	T	UBA7	ENSG000000182179	ENSG000000182179.12	UBA7	Artery_Aorta	432	322805	0.498708	2.04E-11	0.168634	0.02425	10.6912	0.168634
rs7428430	chr3_50136751_C_T_b38	3_50174184_C_T_b37	chr3	50136751 C	T	UBA7	ENSG000000182179	ENSG000000182179.12	UBA7	Skin_Sun_Exposed_Lower_leg	605	322805	0.480992	3.69E-11	0.137808	0.020396	10.43242	0.137808
rs7428430	chr3_50136751_C_T_b38	3_50174184_C_T_b37	chr3	50136751 C	T	UBA7	ENSG000000182179	ENSG000000182179.12	UBA7	Cells_Cultured_fibroblasts	504	322805	0.482402	1.84E-08	0.098377	0.01714	7.735584	0.098377
rs7428430	chr3_50136751_C_T_b38	3_50174184_C_T_b37	chr3	50136751 C	T	UBA7	ENSG000000182179	ENSG000000182179.12	UBA7	Artery_Tibial	663	322805	0.492295	2.02E-08	0.093131	0.016339	7.69412	0.093131
rs7768317	chr6_41954482_C_T_b38	6_41922220_C_T_b37	chr6	41954482 C	T	USP49	ENSG000000164663	ENSG000000164663.14	USP49	Whole_Blood	670	59121	0.265672	5.85E-12	0.240273	0.034205	11.23297	0.240273
rs7768317	chr6_41954482_C_T_b38	6_41922220_C_T_b37	chr6	41954482 C	T	USP49	ENSG000000164663	ENSG000000164663.14	USP49	Artery_Tibial	663	59121	0.254281	1.96E-06	0.111987	0.023269	5.707841	0.111987
rs7768317	chr6_41954482_C_T_b38	6_41922220_C_T_b37	chr6	41954482 C	T	USP49	ENSG000000164663	ENSG000000164663.14	USP49	Cells_Cultured_fibroblasts	504	59121	0.256729	1.77E-05	0.081683	0.018807	4.752267	0.081683
rs111391498	chr4_1347765_A_G_b38	4_1341553_A_G_b37	chr4	1347765 A	G	UVSSA	ENSG000000163945	ENSG000000163945.15	UVSSA	Artery_Tibial	663	499	0.035103	3.46E-82	1.32635	0.057078	81.46081	1.32635
rs111391498	chr4_1347765_A_G_b38	4_1341553_A_G_b37	chr4	1347765 A	G	UVSSA	ENSG000000163945	ENSG000000163945.15	UVSSA	Artery_Aorta	432	499	0.037468	3.39E-55	1.64809	0.085664	54.46963	1.64809
rs111391498	chr4_1347765_A_G_b38	4_1341553_A_G_b37	chr4	1347765 A	G	UVSSA	ENSG000000163945	ENSG000000163945.15	UVSSA	Whole_Blood	670	499	0.038806	7.3E-45	0.913003	0.05967	44.1366	0.913003
rs111391498	chr4_1347765_A_G_b38	4_1341553_A_G_b37	chr4	1347765 A	G	UVSSA	ENSG000000163945	ENSG000000163945.15	UVSSA	Cells_Cultured_fibroblasts	504	499	0.034162	2.28E-43	1.1479	0.073691	42.64136	1.1479
rs111391498	chr4_1347765_A_G_b38	4_1341553_A_G_b37	chr4	1347765 A	G	UVSSA	ENSG000000163945	ENSG000000163945.15	UVSSA	Artery_Coronary	240	499	0.032864	6.26E-22	1.50734	0.135924	21.20348	1.50734
rs111391498	chr4_1347765_A_G_b38	4_1341553_A_G_b37	chr4	1347765 A	G	UVSSA	ENSG000000163945	ENSG000000163945.15	UVSSA	Skin_Sun_Exposed_Lower_leg	605	499	0.038017	4E-21	0.764672	0.077682	20.3981	0.764672
rs111391498	chr4_1347765_A_G_b38	4_1341553_A_G_b37	chr4	1347765 A	G	UVSSA	ENSG000000163945	ENSG000000163945.15	UVSSA	Skin_Not_Sun_Exposed_Suprapubic	517	499	0.037718	2.13E-16	0.747189	0.087498	15.6713	0.747189
rs1805008	chr16_89919736_C_T_b38	16_89986144_C_T_b37	chr16	89919736 C	T	VPS9D1	ENSG000000075399	ENSG000000075399.13	VPS9D1	Skin_Sun_Exposed_Lower_leg	605	198752	0.066116	2.32E-11	0.355541	0.052057	10.63501	0.355541
rs1805008	chr16_89919736_C_T_b38	16_89986144_C_T_b37	chr16	89919736 C	T	VPS9D1	ENSG000000075399	ENSG000000075399.13	VPS9D1	Skin_Not_Sun_Exposed_Suprapubic	517	198752	0.060928	9.96E-11	0.375111	0.056614	10.00179	0.375111
rs1805008	chr16_89919736_C_T_b38	16_89986144_C_T_b37	chr16	899197														