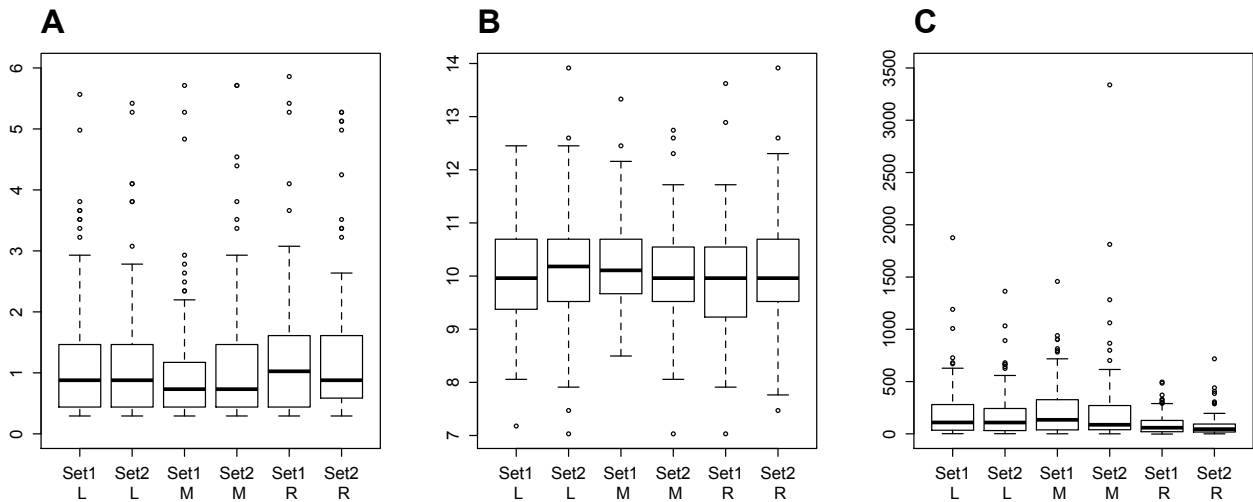


Supporting Information

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Supplementary Figure 1. Distributions of the phenotype measurements for spectral peak width (A), peak frequency (B), and peak amplitude (C). The distributions depict two sets of 98 unrelated individuals (Set1 and Set2) and measurements from the left (L), middle (M), and right (R) parieto-occipital region.

Supplementary Table 1. List of annotated loci in the linkage peak region on chromosome 10.

Gene	Start position	End position	Length	Strand	Shown in Fig. 5B	Description
LOC642361	79825901	79827602	1701	+		H. sapiens uncharacterized LOC642361 (LOC642361), long non-coding RNA.
LOC100288974	79904897	79931818	26921	+		H. sapiens BMS1 homolog, ribosome assembly protein pseudogene (LOC100288974), non-coding RNA.
MBL1P	79920177	79923119	2942	+		H. sapiens mannose-binding lectin (protein A) 1, pseudogene (MBL1P), non-coding RNA.
SFTPD	79937739	79949105	11366	-	yes	H. sapiens surfactant protein D (SFTPD), mRNA.
DQ600650	79967725	79967755	30	-		H. sapiens piRNA piR-38716, complete sequence.
TMEM254-AS1	80046232	80079193	32961	-		H. sapiens TMEM254 antisense RNA 1 (TMEM254-AS1), long non-coding RNA.
TMEM254	80078645	80092551	13906	+	yes	H. sapiens transmembrane protein 254 (TMEM254), mRNA.
PLAC9	80132501	80145028	12527	+	yes	H. sapiens placenta-specific 9 (PLAC9), mRNA.
ANXA11	80155123	80205677	50554	-	yes	H. sapiens annexin A11 (ANXA11), mRNA.
LINC00857	80207709	80219657	11948	+		H. sapiens long intergenic non-protein coding RNA 857 (LINC00857), long non-coding RNA.
MAT1A	80271819	80289678	17859	-	yes	H. sapiens methionine adenosyltransferase I, alpha (MAT1A), mRNA.
DQ596630	80315952	81506316	1190364	-		H. sapiens piRNA piR-34696, complete sequence.
DYDC1	80336105	80356758	20653	-	yes	H. sapiens DPY30 domain containing 1 (DYDC1), mRNA.
DYDC2	80344744	80368073	23329	+		H. sapiens DPY30 domain containing 2 (DYDC2), non-coding RNA.
FAM213A	80407828	80432997	25169	+	yes	H. sapiens family with sequence similarity 213, member A (FAM213A), mRNA.
TSPAN14	80454281	80522635	68354	+	yes	H. sapiens tetraspanin 14 (TSPAN14), mRNA.
DQ580663	80533443	80533474	31	-		H. sapiens piRNA piR-48775, complete sequence.
SH2D4B	80537901	80646560	108659	+	yes	H. sapiens SH2 domain containing 4B (SH2D4B), mRNA.
DQ596066	80990481	80990508	27	+		H. sapiens piRNA piR-34132, complete sequence.
JC172275	81144701	81144721	20	+		Sequence 647 from Patent WO2013150303.
DQ597498	81308912	81308941	29	+		H. sapiens piRNA piR-35564, complete sequence.
DQ593458	81337389	81337417	28	+		H. sapiens piRNA piR-33570, complete sequence.
Mir_544	81707488	84863362	3155874	-		Rfam model RF01045 hit found at contig region AL096704.9/33537-33432
DQ596939	81862486	90832018	8969532	+		H. sapiens piRNA piR-35005, complete sequence.

NRG3*	81875313	82987179	1111866	+	yes	H. sapiens neuregulin 3 (NRG3), mRNA.
L13713	81963198	81963433	235	-		Human scRNA molecule, transcribed from Alu repeat.
U6	82340770	90922835	8582065	+		Rfam model RF00026 hit found at contig region AL391478.14/36142-36247
DQ578550	82478467	84347072	1868605	-		H. sapiens piRNA piR-46662, complete sequence.
DQ594187	82678511	82678541	30	+		H. sapiens piRNA piR-60299, complete sequence.
DQ587130	83378138	91979117	8600979	+		H. sapiens piRNA piR-54242, complete sequence.
JC172208	83835569	90382781	6547212	-		Sequence 580 from Patent WO2013150303.
GHITM	84139428	84153555	14127	+	yes	H. sapiens growth hormone inducible transmembrane protein (GHITM), mRNA.
BC051760	84167227	84172076	4849	-		H. sapiens cDNA clone IMAGE:5723642, partial cds.
C10orf99	84173797	84185294	11497	+		H. sapiens chromosome 10 open reading frame 99 (C10orf99), mRNA.
CDHR1	84194634	84219620	24986	+	yes	H. sapiens cadherin-related family member 1 (CDHR1), mRNA.
LRIT2	84220490	84225589	5099	-	yes	H. sapiens leucine-rich repeat, immunoglobulin-like and transmembrane domains 2 (LRIT2), mRNA.
LRIT1	84231519	84241461	9942	-	yes	H. sapiens leucine-rich repeat, immunoglobulin-like and transmembrane domains 1 (LRIT1), mRNA.
LRRC21	84241407	84241582	175	-		H. sapiens leucine rich repeat containing 21 (LRRC21) mRNA, partial cds, alternatively spliced.
RGR	84245052	84259188	14136	+	yes	H. sapiens retinal G protein coupled receptor (RGR), mRNA.
LINC00858	84279979	84294659	14680	+		H. sapiens long intergenic non-protein coding RNA 858 (LINC00858), long non-coding RNA.
CCSER2	84328588	84518521	189933	+	yes	H. sapiens coiled-coil serine-rich protein 2 (CCSER2), mRNA.
DD413707	84391161	84391181	20	+		Regulation of Mammalian Cells.
U02063	84888606	92398493	7509887	+		Human clone 4 Alu repeat mRNA sequence.
JC172250	84931312	84931333	21	-		Sequence 622 from Patent WO2013150303.
JC172329	85156167	85156187	20	+		Sequence 701 from Patent WO2013150303.
AK097624	85193420	85198938	5518	-		H. sapiens cDNA FLJ40305 fis, clone TESTI2029244.
DQ578736	85410379	85410409	30	+		H. sapiens piRNA piR-46848, complete sequence.
GRID1-AS1	85577730	85607215	29485	+		H. sapiens GRID1 antisense RNA 1 (GRID1-AS1), long non-coding RNA.
GRID1*	85599554	86366493	766939	-	yes	H. sapiens glutamate receptor, ionotropic, delta 1 (GRID1), mRNA.
AX746544	85644072	85648066	3994	+		Sequence 69 from Patent EP1308459.
7SK	85650011	85650260	249	-		Rfam model RF00100 hit found at contig region AC022028.7/89017-88769
DQ578393	86107590	86107619	29	-		H. sapiens piRNA piR-46505, complete sequence.
DQ589229	86118439	86118466	27	-		H. sapiens piRNA piR-56341, complete sequence.

MIR346	86264693	86264788	95	-		H. sapiens microRNA 346 (MIR346), microRNA.
WAPAL	86435255	86521784	86529	-	yes	H. sapiens wings apart-like homolog (Drosophila) (WAPAL), mRNA.
DQ591044	86455398	86455441	43	+		H. sapiens piRNA piR-58156, complete sequence.
WAPL	86521615	86521739	124	-		H. sapiens WAPL mRNA for wings apart-like homolog variant 18, partial cds.
OPN4	86654556	86666848	12292	+	yes	H. sapiens opsin 4 (OPN4), mRNA.
LDB3	86666793	86736067	69274	+	yes	H. sapiens LIM domain binding 3 (LDB3), mRNA.
AX747977	86732391	86735252	2861	+		Sequence 1502 from Patent EP1308459.
BMPR1A	86756638	86925188	168550	+	yes	H. sapiens bone morphogenetic protein receptor, type IA (BMPR1A), mRNA.
AB120919	86864329	86864911	582	+		H. sapiens RNA transcript, HERV-H env, isolate:CHE11-8.
MMRN2	86935540	86957668	22128	-	yes	H. sapiens multimerin 2 (MMRN2), mRNA.
SNCG	86958530	86963260	4730	+	yes	H. sapiens synuclein, gamma (breast cancer-specific protein 1) (SNCG), mRNA.
AL157440	86967156	86970814	3658	-		H. sapiens mRNA; cDNA DKFZp434C185 (from clone DKFZp434C185).
ADIRF	86968430	86970909	2479	+	yes	H. sapiens adipogenesis regulatory factor (ADIRF), mRNA.
AGAP11	86970740	87024730	53990	+	yes	H. sapiens ankyrin repeat and GTPase domain Arf GTPase activating protein 11 (AGAP11), mRNA.
FAM25A	87020288	87024730	4442	+	yes	H. sapiens family with sequence similarity 25, member A (FAM25A), mRNA.
GLUD1	87050201	87095019	44818	-	yes	H. sapiens glutamate dehydrogenase 1 (GLUD1), mRNA.
DQ588547	87080367	87080394	27	+		H. sapiens piRNA piR-55659, complete sequence.
DQ601422	87080474	87080506	32	+		H. sapiens piRNA piR-39488, complete sequence.
FAM35A	87095195	87191465	96270	+	yes	H. sapiens family with sequence similarity 35, member A (FAM35A), mRNA.
NUTM2A-AS1	87205787	87342558	136771	-		H. sapiens NUTM2A antisense RNA 1 (NUTM2A-AS1), long non-coding RNA.
NUTM2A	87225447	87234976	9529	+	yes	H. sapiens NUT family member 2A (NUTM2A), mRNA.
LOC439994	87342410	87343574	1164	+		H. sapiens uncharacterized LOC439994 (LOC439994), long non-coding RNA.
BC082979	87342921	87357301	14380	+		H. sapiens cDNA clone IMAGE:6575899.
NUTM2D	87357719	87370695	12976	+		H. sapiens NUT family member 2D (NUTM2D), non-coding RNA.
LINC00864	87396573	87407700	11127	-		H. sapiens long intergenic non-protein coding RNA 864 (LINC00864), long non-coding RNA.
MIR4678	87503880	87503954	74	+		H. sapiens microRNA 4678 (MIR4678), microRNA.
MINPP1	87504465	87553461	48996	+	yes	H. sapiens multiple inositol-polyphosphate phosphatase 1 (MINPP1), mRNA.
PAPSS2	87659718	87747705	87987	+	yes	H. sapiens 3'-phosphoadenosine 5'-phosphosulfate synthase 2 (PAPSS2), mRNA.
ATAD1*	87753117	87818160	65043	-	yes	H. sapiens ATPase family, AAA domain containing 1 (ATAD1), mRNA.

CFL1P1	87818312	87845612	27300	+		H. sapiens cofilin 1 (non-muscle) pseudogene 1 (CFL1P1), non-coding RNA.
KLLN	87859160	87863437	4277	-	yes	H. sapiens killin, p53-regulated DNA replication inhibitor (KLLN), mRNA.
PTEN	87863437	87968775	105338	+	yes	H. sapiens phosphatase and tensin homolog (PTEN), mRNA.
AK130076	87947167	87948937	1770	+		H. sapiens cDNA FLJ26566 fis, clone LNF05224.
RNLS	88132299	88583325	451026	-	yes	H. sapiens renalase, FAD-dependent amine oxidase (RNLS), mRNA.
LIPJ	88586761	88606976	20215	+	yes	H. sapiens lipase, family member J (LIPJ), mRNA.
LIPF	88664388	88678815	14427	+	yes	H. sapiens lipase, gastric (LIPF), mRNA.
LIPK	88724543	88752756	28213	+	yes	H. sapiens lipase, family member K (LIPK), mRNA.
LIPN	88761405	88778242	16837	+	yes	H. sapiens lipase, family member N (LIPN), mRNA.
LIPM	88802729	88820546	17817	+	yes	H. sapiens lipase, family member M (LIPM), mRNA.
ANKRD22	88819901	88851975	32074	-	yes	H. sapiens ankyrin repeat domain 22 (ANKRD22), mRNA.
STAMBPL1	88880186	88975153	94967	+	yes	H. sapiens STAM binding protein-like 1 (STAMBPL1), mRNA.
BC069782	88908170	88909397	1227	+		H. sapiens cDNA clone IMAGE:7262608, with apparent retained intron.
AX748062	88932683	88939974	7291	+		Sequence 1587 from Patent EP1308459.
ACTA2	88935073	88991390	56317	-	yes	H. sapiens actin, alpha 2, smooth muscle, aorta (ACTA2), mRNA.
FAS	88969795	89015785	45990	+	yes	H. sapiens Fas cell surface death receptor (FAS), mRNA.
FAS-AS1	88991423	88992975	1552	-		H. sapiens FAS antisense RNA 1 (FAS-AS1), long non-coding RNA.
HV303528	89003030	89003059	29	-		JP 2009535045-A/390: Short interfering ribonucleic acid (siRNA) for oral administration.
HV303525	89003107	89003177	70	-		JP 2009535045-A/387: Short interfering ribonucleic acid (siRNA) for oral administration.
MIR4679-2	89063334	89063411	77	-		H. sapiens microRNA 4679-2 (MIR4679-2), microRNA.
MIR4679-1	89063335	89063410	75	+		H. sapiens microRNA 4679-1 (MIR4679-1), microRNA.
DQ571824	89072713	89072741	28	+		H. sapiens piRNA piR-31936, complete sequence.
CH25H	89205936	89207314	1378	-	yes	H. sapiens cholesterol 25-hydroxylase (CH25H), mRNA.
LIPA	89213568	89414625	201057	-	yes	H. sapiens lipase A, lysosomal acid, cholesterol esterase (LIPA), mRNA.
BC040833	89277663	89342674	65011	-		H. sapiens cDNA clone IMAGE:5299308.
IFIT2	89301948	89309276	7328	+	yes	H. sapiens interferon-induced protein with tetratricopeptide repeats 2 (IFIT2), mRNA.
IFIT3	89327818	89340968	13150	+	yes	H. sapiens interferon-induced protein with tetratricopeptide repeats 3 (IFIT3), mRNA.
IFIT1B	89378055	89385205	7150	+	yes	H. sapiens interferon-induced protein with tetratricopeptide repeats 1B (IFIT1B), mRNA.
IFIT1	89392545	89406487	13942	+	yes	H. sapiens interferon-induced protein with tetratricopeptide repeats 1 (IFIT1), mRNA.

IFIT5	89414567	89421002	6435	+	yes	H. sapiens interferon-induced protein with tetratricopeptide repeats 5 (IFIT5), mRNA.
SLC16A12	89430293	89535556	105263	-	yes	H. sapiens solute carrier family 16, member 12 (SLC16A12), mRNA.
PANK1	89579496	89645572	66076	-	yes	H. sapiens pantothenate kinase 1 (PANK1), mRNA.
MIR107	89592746	89592827	81	-		H. sapiens microRNA 107 (MIR107), microRNA.
JB620946	89592757	89592778	21	+		Sequence 926 from Patent WO2013063544.
FLJ37201	89691299	89697928	6629	-		H. sapiens tigger transposable element derived 2 pseudogene (FLJ37201), non-coding RNA.
KIF20B	89701589	89774943	73354	+	yes	H. sapiens kinesin family member 20B (KIF20B), mRNA.
KRMP1	89733055	89733261	206	+		H. sapiens KRMP1 mRNA for mitotic kinesin-related protein, partial cds, alternative exon sequence.
DQ595025	89746224	89746252	28	-		H. sapiens piRNA piR-61137, complete sequence.
LINC00865	89829492	89840861	11369	+		H. sapiens long intergenic non-protein coding RNA 865 (LINC00865), long non-coding RNA.
AK093219	89915488	89957373	41885	-		H. sapiens cDNA FLJ35900 fis, clone TESTI2009545.
DQ571826	90234540	90234566	26	-		H. sapiens piRNA piR-31938, complete sequence.
BC037970	90454168	90501437	47269	+		H. sapiens, clone IMAGE:4520798, mRNA.
HTR7*	90740818	90857914	117096	-	yes	H. sapiens 5-hydroxytryptamine (serotonin) receptor 7, adenylate cyclase-coupled (HTR7), mRNA.
RPP30	90871517	90908555	37038	+	yes	H. sapiens ribonuclease P/MRP 30kDa subunit (RPP30), mRNA.
ANKRD1	90912099	90921275	9176	-	yes	H. sapiens ankyrin repeat domain 1 (cardiac muscle) (ANKRD1), mRNA.
LINC00502	91045807	91062159	16352	+		H. sapiens long intergenic non-protein coding RNA 502 (LINC00502), long non-coding RNA.
NUDT9P1	91152005	91153080	1075	-		H. sapiens nudix-type motif 9 pseudogene 1 (NUDT9P1), non-coding RNA.
PCGF5	91163011	91284331	121320	+	yes	H. sapiens polycomb group ring finger 5 (PCGF5), mRNA.
LOC100188947	91306961	91611460	304499	-		H. sapiens uncharacterized LOC100188947 (LOC100188947), long non-coding RNA.
HECTD2	91410284	91514828	104544	+	yes	H. sapiens HECT domain containing E3 ubiquitin protein ligase 2 (HECTD2), mRNA.
PPP1R3C	91628439	91633101	4662	-	yes	H. sapiens protein phosphatase 1, regulatory subunit 3C (PPP1R3C), mRNA.
TNKS2-AS1	91782838	91798291	15453	-		H. sapiens TNKS2 antisense RNA 1 (head to head) (TNKS2-AS1), long non-coding RNA.
TNKS2	91798393	91865475	67082	+	yes	H. sapiens tankyrase, TRF1-interacting ankyrin-related ADP-ribose polymerase 2 (TNKS2), mRNA.
Mir_584	91832324	91832444	120	-		Rfam model RF01016 hit found at contig region AL359707.18/98081-97962
FGFBP3	91906587	91909501	2914	-	yes	H. sapiens fibroblast growth factor binding protein 3 (FGFBP3), mRNA.
BTA1F1	91923978	92030323	106345	+	yes	H. sapiens BTA1F1 RNA polymerase II, B-TFIID transcription factor-associated, 170kDa (BTA1F1), mRNA.
L13714	91973622	91973740	118	+		Human scRNA molecule, transcribed from Alu repeat.
CPEB3	92048639	92291118	242479	-	yes	H. sapiens cytoplasmic polyadenylation element binding protein 3 (CPEB3), mRNA.

SNORA25	92076241	92076365	124	+		Rfam model RF00402 hit found at contig region AL365398.22/87452-87575
CPEB3_ribozyme	92204228	92204306	78	-		Rfam model RF00622 hit found at contig region AL158040.14/122218-122141
MARCH5	92291162	92353964	62802	+	yes	H. sapiens membrane-associated ring finger (C3HC4) 5 (MARCH5), mRNA.
DQ586320	92377157	92377234	77	+		H. sapiens piRNA piR-53432, complete sequence.