

**Supplementary Table 2.** *SORL1* 3-SNP sliding window haplotype associations with hippocampal volume in the combined sample.

SNP Number	SNP	Position*	SNP type†	Haplotype Number¶	Global p	Max p
1	rs6589878	120728302	UP	1	8.07E-01	8.54E-01
2	rs4936618	120729206	UP	2	7.19E-01	7.45E-01
3	rs891437	120729986	UP	3	7.04E-01	8.63E-01
4	rs12417012	120731232	UP	4	7.77E-01	8.42E-01
5	rs2043107	120735412	UP	5	9.20E-01	8.59E-01
6	rs10750187	120735435	UP	6	8.89E-01	7.98E-01
7	rs4936621	120738021	UP	7	7.74E-01	7.97E-01
8	rs10790443	120739341	UP	8	7.98E-01	7.86E-01
9	rs10790444	120740339	UP	9	7.02E-01	6.61E-01
10	rs1529578	120740881	UP	10	8.53E-01	7.86E-01
11	rs1529579	120741081	UP	11	5.15E-01	4.45E-01
12	rs4935769	120742044	UP	12	1.72E-01	3.49E-01
13	rs4936625	120742455	UP	13	4.32E-01	4.37E-01
14	rs72991	120748926	UP	14	7.46E-01	8.46E-01
15	rs733435	120748971	UP	15	6.06E-01	5.72E-01
16	rs297526	120749220	UP	16	5.15E-01	3.41E-01
17	rs7116595	120751341	UP	17	5.20E-02	4.62E-01
18	rs297491	120760534	UP	18	4.98E-01	4.86E-01
19	rs6589880	120760909	UP	19	6.47E-01	5.44E-01
20	rs212501	120761319	UP	20	5.20E-01	4.97E-01
21	rs297487	120762304	UP	21	5.23E-01	5.14E-01
22	rs2370386	120763628	UP	22	4.50E-02	7.20E-02
23	rs903243	120764316	UP	23	9.90E-02	2.32E-01
24	rs2453146	120764691	UP	24	3.44E-01	6.78E-01
25	rs662738	120765567	UP	25	2.31E-01	2.13E-01
26	rs297502	120769026	UP	26	4.33E-01	4.55E-01
27	rs297503	120769636	UP	27	7.29E-01	6.48E-01
28	rs747220	120769768	UP	28	2.46E-01	1.19E-01
29	rs12290188	120771229	UP	29	2.19E-01	1.97E-01
30	rs297505	120772695	UP	30	3.54E-01	2.08E-01
31	rs297510	120777056	UP	31	3.03E-01	8.99E-01
32	rs297511	120777561	UP	32	7.50E-02	2.99E-01
33	rs297513	120780516	UP	33	1.10E-01	2.61E-01
34	rs297517	120799570	UP	34	3.26E-01	2.30E-01
35	rs17125331	120807029	UP	35	5.92E-01	4.00E-01
36	rs17125333	120807856	UP	36	2.37E-01	6.60E-02
37	rs17125336	120808416	UP	37	2.53E-01	1.08E-01
38	rs17125342	120813518	UP	38	2.37E-01	1.82E-01
39	rs668053	120813735	UP	39	1.98E-01	1.86E-01
40	rs11218292	120815774	UP	40	2.32E-01	2.48E-01
41	rs4935774	120826964	UP	41	4.00E-02	2.12E-01
<b>42</b>	<b>rs661057</b>	<b>120834164</b>	ON	<b>42</b>	9.80E-02	<b>4.20E-02</b>

43	rs3862605	120834251	ON	43	3.59E-01	3.22E-01
44	rs1784934	120843203	ON	44	3.31E-01	2.67E-01
45	rs676160	120845443	ON	45	1.95E-01	2.01E-01
46	rs3781826	120848256	ON	46	5.00E-02	3.20E-02
47	rs12276905	120861389	ON	47	5.90E-02	2.90E-02
48	rs676759	120864475	ON	48	5.75E-02	2.50E-02
<b>49</b>	<b>rs560573</b>	<b>120866094</b>	ON	<b>49</b>	2.70E-02	1.29E-02
50	rs2298525	120866225	ON	50	4.30E-02	2.60E-02
51	rs985421	120867526	ON	51	7.10E-02	4.00E-02
52	rs593769	120869213	ON	52	1.00E-01	2.70E-02
53	rs12364988	120872836	ON	53	2.80E-02	1.80E-02
<b>54</b>	<b>rs668387</b>	<b>120873131</b>	ON	<b>54</b>	2.70E-02	1.70E-02
55	rs923892	120873373	ON	55	4.70E-02	4.10E-02
56	rs11218313	120888081	ON	56	1.04E-01	4.50E-02
57	rs12421319	120903720	ON	57	6.50E-02	4.30E-02
58	rs666004	120903788	ON	58	9.90E-02	8.80E-02
59	rs11501162	120905972	ON	59	2.22E-01	2.20E-01
60	rs10502262	120920522	ON	60	3.10E-01	2.31E-01
61	rs11218325	120921397	ON	61	2.92E-01	2.43E-01
62	rs7933552	120922038	ON	62	3.18E-01	2.08E-01
63	rs11218326	120922334	ON	63	7.09E-01	7.49E-01
64	rs11607927	120927179	ON	64	9.17E-01	8.44E-01
65	rs7131432	120932080	ON	65	3.27E-02	1.90E-02
<b>66</b>	<b>rs11218340</b>	<b>120936564</b>	ON	<b>66</b>	6.84E-02	1.80E-02
67	rs640479	120937693	ON	67	6.40E-02	1.70E-02
68	rs11218342	120939638	ON	68	1.75E-01	1.03E-01
69	rs10892756	120939766	ON	69	6.14E-01	5.45E-01
70	rs11218343	120940797	ON	70	3.33E-01	1.65E-01
71	rs11218346	120944391	ON	71	1.20E-01	1.05E-01
72	rs1792124	120946730	ON	72	1.48E-01	1.23E-01
73	rs1790213	120947399	ON	73	2.40E-02	1.32E-01
74	rs1699105	120947829	ON	74	7.55E-03	7.82E-02
75	rs924746	120948247	ON	75	2.37E-02	1.55E-02
76	rs3781834	120951150	ON	76	1.19E-02	3.00E-02
77	rs4420280	120951269	ON	77	6.50E-02	2.80E-02
78	rs11218347	120951758	ON	78	1.83E-01	9.40E-02
79	rs3781836	120953548	ON	79	9.20E-02	8.40E-02
80	rs1699103	120957136	ON	80	7.30E-02	8.30E-02
81	rs7116734	120957150	ON	81	1.26E-01	3.10E-02
82	rs11218350	120957861	ON	82	4.07E-01	2.83E-01
83	rs11218351	120958917	ON	83	4.95E-01	3.03E-01
84	rs10892759	120969298	ON	84	7.00E-02	3.70E-02
85	rs1792113	120970156	ON	85	1.13E-02	1.14E-01
86	rs1620003	120978203	ON	86	1.69E-01	6.10E-02
87	rs11218360	120978601	ON	87	5.90E-01	4.46E-01
88	rs7128608	120978808	ON	88	1.54E-01	9.90E-02

89	rs17125523	120979449	ON	89	2.50E-02	7.00E-02
90	rs1629493	120982306	ON	90	7.70E-02	6.30E-02
91	rs2282648	120983705	ON	91	7.00E-02	4.30E-02
<b>92</b>	<b>rs2282649</b>	<b>120984168</b>	ON	<b>92</b>	1.94E-01	5.40E-02
93	rs726601	120986617	ON	93	8.10E-02	4.80E-02
94	rs1784931	120988148	ON	94	1.37E-01	7.50E-02
<b>95</b>	<b>rs1010159</b>	<b>120988611</b>	ON	<b>95</b>	3.34E-01	1.42E-01
96	rs1010158	120988861	ON	96	1.73E-01	1.41E-01
<b>97</b>	<b>rs1614735</b>	<b>120998211</b>	ON	<b>97</b>	4.51E-01	2.42E-01
98	rs17125558	120999237	ON	98	1.06E-01	8.30E-02
99	rs10790448	121000765	ON	99	1.96E-03	1.23E-02
100	rs10892761	121003094	ON	100	5.81E-03	9.48E-03
101	rs540860	121036098	DOWN	101	5.68E-03	8.70E-04
102	rs663175	121039037	DOWN	102	4.00E-03	1.23E-03
103	rs647905	121040148	DOWN	103	2.63E-02	1.12E-02
104	rs568599	121041221	DOWN	104	3.59E-02	1.04E-02
105	rs531294	121045852	DOWN	105	1.28E-01	2.20E-02
106	rs11218381	121067926	DOWN	106	3.01E-02	5.52E-03
107	rs10502260	121073107	DOWN	107	1.00E-03	7.72E-03
108	rs17337279	121073326	DOWN	108	3.40E-03	7.50E-04
109	rs2887763	121073389	DOWN	109	1.10E-03	8.80E-04
110	rs10892771	121073472	DOWN	110	9.27E-03	8.93E-03
111	rs540824	121080068	DOWN	111	3.69E-01	2.46E-01
112	rs1074086	121080305	DOWN	112	3.59E-01	2.39E-01
113	rs662333	121084155	DOWN	113	7.71E-01	9.74E-01
114	rs540029	121089627	DOWN	114	2.46E-01	1.64E-01
115	rs618048	121089783	DOWN	115	2.40E-01	1.69E-01
116	rs10790452	121090141	DOWN			
117	rs92061	121093256	DOWN			

\*Position in base pairs according to NCBI build 36.3; † Describes if the SNP is upstream of *SORL1* (UP), within *SORL1* (ON) or downstream of *SORL1* (DOWN); ¶ 3-SNP haplotype number, starting from SNP number one. Each haplotype is created by the numbered SNP plus the two after it in positional order, i.e. HAP 1 = rs6589878, rs4936618 and rs891437; **Bold SNP** names show the SNPs in haplotypes previously reported associated with AD by Cuenco et al.; **Global p** measures significance of the entire set of haplotypes for the locus subset. **Max p** shows the permuted p-value and the [redacted] in the last column indicate that the haplotype is associated with hippocampal volume ( $p \leq 0.05$ ). Compared to the discovery cohort, 1 SNP did not reach a call rate of 95% and 1 SNP showed a frequency of less than 1% in the replication sample.