

SUPPLEMENTARY INFORMATION

Relevance Epistasis Network of Gastritis for Intra-chromosomes in the KARE Cohort Study

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Supplementary Table 1. List of significant SNP pairs and their p-values

Chromosome	Loci		M.I.	p-value
1	rs16859942	rs16833167	0.0115	4.36E-02
1	rs16859942	rs2104927	0.0115	4.62E-02
2	rs41419446	rs17654413	0.0125	4.27E-03
2	rs6729316	rs4629147	0.0125	4.86E-03
2	rs1026992	rs826129	0.0119	1.91E-02
2	rs6729316	rs16865783	0.0118	2.58E-02
2	rs6729316	rs11124220	0.0117	2.88E-02
2	rs6729316	rs2975788	0.0116	3.69E-02
3	rs17670486	rs12489012	0.0116	2.80E-02
3	rs17248901	rs6799941	0.0114	4.87E-02
6	rs243131	rs10484725	0.0125	3.03E-03
6	rs16877530	rs6455943	0.0124	4.14E-03
6	rs16877530	rs3804498	0.0123	5.23E-03
6	rs243131	rs6917401	0.0122	6.66E-03
6	rs7739767	rs10485258	0.0118	1.42E-02
6	rs243131	rs3942865	0.0118	1.50E-02
6	rs243131	rs12194557	0.0117	2.06E-02
6	rs16877530	rs9321365	0.0117	2.18E-02
6	rs16877530	rs2322747	0.0115	2.81E-02
6	rs3799853	rs12526105	0.0115	2.84E-02
7	rs17427703	rs10953881	0.0132	3.98E-04
9	rs169730	rs1331247	0.0137	1.04E-04
9	rs169730	rs17352208	0.0135	1.78E-04
9	rs169730	rs4073871	0.0131	4.57E-04
9	rs2151065	rs1999368	0.0127	1.14E-03
9	rs2025167	rs17789358	0.0125	1.77E-03
9	rs169730	rs10989904	0.0125	1.84E-03
9	rs1487508	rs17800716	0.0124	2.48E-03
9	rs169730	rs10813746	0.0123	2.90E-03
9	rs169730	rs17055851	0.0123	3.03E-03
9	rs7859893	rs575107	0.0122	3.46E-03
9	rs1260460	rs2275888	0.0122	3.83E-03
9	rs7859237	rs7039577	0.0121	4.47E-03
9	rs169730	rs7871055	0.0121	4.75E-03
9	rs169730	rs7870807	0.0121	4.78E-03
9	rs169730	rs3126950	0.0121	5.05E-03
9	rs17347542	rs7020658	0.0120	6.45E-03
9	rs169730	rs10813879	0.0120	6.52E-03
9	rs4130867	rs10991808	0.0120	6.52E-03

9	rs11142815	rs2900469	0.0119	6.74E-03
9	rs169730	rs2224447	0.0119	7.24E-03
9	rs169730	rs7048595	0.0119	7.40E-03
9	rs169730	rs1889010	0.0119	7.79E-03
9	rs17061485	rs2779724	0.0119	7.83E-03
9	rs169730	rs4487842	0.0119	7.87E-03
9	rs169730	rs10119786	0.0119	7.89E-03
9	rs169730	rs10756320	0.0119	8.09E-03
9	rs169730	rs1318664	0.0119	8.23E-03
9	rs169730	rs4297092	0.0118	8.59E-03
9	rs169730	rs10817405	0.0118	8.61E-03
9	rs169730	rs11140349	0.0118	8.94E-03
9	rs169730	rs657964	0.0118	9.09E-03
9	rs169730	rs2674087	0.0118	9.15E-03
9	rs9697131	rs11790517	0.0118	9.69E-03
9	rs169730	rs7027121	0.0118	1.02E-02
9	rs13301071	rs16931907	0.0117	1.12E-02
9	rs4877599	rs10761082	0.0117	1.26E-02
9	rs169730	rs1930790	0.0116	1.35E-02
9	rs169730	rs17351637	0.0116	1.36E-02
9	rs169730	rs1339248	0.0116	1.39E-02
9	rs10959917	rs10869137	0.0116	1.45E-02
9	rs9314750	rs7853594	0.0116	1.45E-02
9	rs169730	rs563805	0.0116	1.46E-02
9	rs169730	rs10981674	0.0116	1.50E-02
9	rs10965244	rs10858231	0.0116	1.51E-02
9	rs1327489	rs2297533	0.0116	1.54E-02
9	rs10511575	rs1029034	0.0116	1.55E-02
9	rs169730	rs11789717	0.0116	1.57E-02
9	rs169730	rs13285155	0.0116	1.58E-02
9	rs169730	rs12379369	0.0116	1.62E-02
9	rs2031195	rs7862812	0.0116	1.63E-02
9	rs13286966	rs10869463	0.0115	1.77E-02
9	rs169730	rs2251622	0.0115	1.79E-02
9	rs169730	rs7047070	0.0115	1.79E-02
9	rs169730	rs9299353	0.0115	1.79E-02
9	rs169730	rs2031195	0.0115	1.80E-02
9	rs10964337	rs16907685	0.0115	1.87E-02
9	rs7027647	rs10435850	0.0115	2.02E-02
9	rs169730	rs7041124	0.0115	2.04E-02
9	rs169730	rs4422822	0.0115	2.07E-02
9	rs10976937	rs10987290	0.0115	2.09E-02

9	rs12551707	rs638541	0.0114	2.15E-02
9	rs169730	rs7859203	0.0114	2.20E-02
9	rs169730	rs13286966	0.0114	2.21E-02
9	rs10975323	rs569434	0.0114	2.22E-02
9	rs169730	rs12000170	0.0114	2.25E-02
9	rs2485157	rs3739929	0.0114	2.32E-02
9	rs169730	rs7019482	0.0114	2.45E-02
9	rs13287547	rs9314750	0.0114	2.45E-02
9	rs2113939	rs10983685	0.0114	2.51E-02
9	rs169730	rs4454352	0.0114	2.59E-02
9	rs169730	rs7030906	0.0114	2.61E-02
9	rs17287864	rs7019068	0.0114	2.67E-02
9	rs169730	rs902923	0.0114	2.69E-02
9	rs10780261	rs10982516	0.0113	2.73E-02
9	rs169730	rs12551478	0.0113	2.74E-02
9	rs12001366	rs10759734	0.0113	2.74E-02
9	rs10974334	rs1411792	0.0113	2.84E-02
9	rs9694997	rs2756912	0.0113	2.84E-02
9	rs10962814	rs34971054	0.0113	2.85E-02
9	rs169730	rs7044513	0.0113	2.95E-02
9	rs12551465	rs16908259	0.0113	3.06E-02
9	rs169730	rs7859237	0.0113	3.06E-02
9	rs169730	rs6560319	0.0113	3.10E-02
9	rs169730	rs10759821	0.0113	3.10E-02
9	rs2251622	rs41529151	0.0113	3.11E-02
9	rs169730	rs10465021	0.0113	3.15E-02
9	rs169730	rs10969893	0.0113	3.16E-02
9	rs169730	rs2018717	0.0113	3.21E-02
9	rs169730	rs1530331	0.0113	3.27E-02
9	rs957	rs17394582	0.0113	3.31E-02
9	rs16923908	rs10858265	0.0112	3.48E-02
9	rs169730	rs10982235	0.0112	3.50E-02
9	rs169730	rs10809860	0.0112	3.54E-02
9	rs10511437	rs1536864	0.0112	3.60E-02
9	rs2383046	rs1927983	0.0112	3.61E-02
9	rs169730	rs514522	0.0112	3.90E-02
9	rs7042837	rs7039358	0.0112	3.91E-02
9	rs169730	rs7855444	0.0112	3.95E-02
9	rs169730	rs13287547	0.0112	4.01E-02
9	rs169730	rs12335425	0.0112	4.05E-02
9	rs169730	rs12001366	0.0112	4.06E-02
9	rs2152263	rs17051844	0.0112	4.06E-02

9	rs169730	rs1347791	0.0112	4.09E-02
9	rs169730	rs10814339	0.0112	4.13E-02
9	rs10815985	rs3904999	0.0112	4.14E-02
9	rs1023087	rs1323420	0.0112	4.18E-02
9	rs169730	rs11142719	0.0112	4.20E-02
9	rs4977501	rs10979455	0.0112	4.20E-02
9	rs169730	rs4978577	0.0112	4.25E-02
9	rs1609625	rs17053979	0.0112	4.32E-02
9	rs169730	rs3922982	0.0111	4.34E-02
9	rs169730	rs502436	0.0111	4.39E-02
9	rs10756216	rs7025349	0.0111	4.49E-02
9	rs169730	rs7863262	0.0111	4.57E-02
9	rs10780959	rs6559328	0.0111	4.61E-02
9	rs10976375	rs10985207	0.0111	4.75E-02
9	rs7857417	rs1074670	0.0111	4.81E-02
9	rs169730	rs7020290	0.0111	4.88E-02
9	rs169730	rs445722	0.0111	4.97E-02
11	rs7118678	rs4542446	0.0112	4.14E-02
14	rs999692	rs1959873	0.0126	6.82E-04
14	rs2401887	rs2296145	0.0119	3.57E-03
14	rs2401887	rs34854034	0.0116	7.23E-03
14	rs2401887	rs8012888	0.0112	1.81E-02
14	rs17100427	rs2895908	0.0109	3.84E-02
15	rs493971	rs11633819	0.0287	3.58E-21
15	rs493971	rs3751586	0.0286	3.97E-21
15	rs7178255	rs11629846	0.0285	5.60E-21
15	rs493971	rs11072213	0.0284	7.18E-21
15	rs493971	rs2086329	0.0278	2.93E-20
15	rs493971	rs685201	0.0278	3.49E-20
15	rs493971	rs1863094	0.0278	3.61E-20
15	rs493971	rs16975740	0.0277	3.68E-20
15	rs493971	rs11637631	0.0276	4.76E-20
15	rs493971	rs488156	0.0275	6.95E-20
15	rs493971	rs335789	0.0275	7.04E-20
15	rs493971	rs17661734	0.0274	8.34E-20
15	rs493971	rs16975213	0.0274	9.92E-20
15	rs493971	rs1919175	0.0272	1.32E-19
15	rs493971	rs2469149	0.0272	1.42E-19
15	rs493971	rs4483822	0.0272	1.50E-19
15	rs493971	rs11631130	0.0272	1.55E-19
15	rs493971	rs11855112	0.0272	1.59E-19
15	rs493971	rs4777568	0.0272	1.64E-19

15	rs493971	rs4965476	0.0271	1.85E-19
15	rs493971	rs2163194	0.0271	1.88E-19
15	rs493971	rs939590	0.0271	1.95E-19
15	rs6576537	rs10518833	0.0271	2.03E-19
15	rs493971	rs8034178	0.0270	2.34E-19
15	rs493971	rs7170474	0.0270	2.36E-19
15	rs9806705	rs7177662	0.0270	2.55E-19
15	rs493971	rs11071385	0.0270	2.57E-19
15	rs493971	rs3743261	0.0269	2.92E-19
15	rs493971	rs8024690	0.0269	3.16E-19
15	rs493971	rs9944177	0.0269	3.35E-19
15	rs493971	rs1364822	0.0268	3.52E-19
15	rs493971	rs965538	0.0268	3.68E-19
15	rs493971	rs12595648	0.0268	3.70E-19
15	rs493971	rs12915412	0.0268	3.81E-19
15	rs493971	rs17336789	0.0268	3.91E-19
15	rs12916870	rs16971340	0.0267	5.35E-19
15	rs493971	rs10083714	0.0267	5.35E-19
15	rs493971	rs1657792	0.0266	6.09E-19
15	rs493971	rs1648245	0.0266	6.18E-19
15	rs493971	rs12438157	0.0266	6.26E-19
15	rs316611	rs12916134	0.0266	6.42E-19
15	rs493971	rs301848	0.0266	6.56E-19
15	rs493971	rs4775177	0.0266	7.37E-19
15	rs493971	rs7179693	0.0266	7.38E-19
15	rs7169431	rs4077174	0.0265	7.53E-19
15	rs493971	rs12439689	0.0265	7.84E-19
15	rs493971	rs4777032	0.0265	8.49E-19
15	rs493971	rs12324744	0.0265	8.82E-19
15	rs3751586	rs4886707	0.0265	8.91E-19
15	rs493971	rs6494768	0.0265	8.98E-19
15	rs493971	rs2086455	0.0265	9.29E-19
15	rs493971	rs16977850	0.0265	9.39E-19
15	rs493971	rs4281685	0.0264	1.02E-18
15	rs17303803	rs2139952	0.0264	1.06E-18
15	rs493971	rs2606163	0.0264	1.12E-18
15	rs493971	rs16975304	0.0264	1.17E-18
15	rs7172629	rs2018100	0.0264	1.17E-18
15	rs493971	rs2970357	0.0264	1.18E-18
15	rs4924305	rs2552175	0.0264	1.20E-18
15	rs17661734	rs288438	0.0264	1.21E-18
15	rs493971	rs6496412	0.0263	1.23E-18

15	rs493971	rs1877782	0.0263	1.23E-18
15	rs493971	rs11858307	0.0263	1.24E-18
15	rs493971	rs12441657	0.0263	1.26E-18
15	rs7403021	rs2260971	0.0263	1.27E-18
15	rs2412716	rs6494849	0.0263	1.28E-18
15	rs493971	rs16954227	0.0263	1.30E-18
15	rs493971	rs873843	0.0263	1.30E-18
15	rs493971	rs12913742	0.0263	1.35E-18
15	rs12442708	rs7171279	0.0263	1.38E-18
15	rs493971	rs16977939	0.0263	1.41E-18
15	rs493971	rs12916690	0.0263	1.53E-18
15	rs669653	rs12441227	0.0263	1.54E-18
15	rs17116685	rs338342	0.0263	1.55E-18
15	rs493971	rs7169431	0.0263	1.56E-18
15	rs493971	rs2347450	0.0262	1.58E-18
15	rs16954227	rs2839734	0.0262	1.62E-18
15	rs493971	rs6496029	0.0262	1.62E-18
15	rs493971	rs1551991	0.0262	1.66E-18
15	rs493971	rs8032675	0.0262	1.69E-18
15	rs1918646	rs3901588	0.0262	1.70E-18
15	rs493971	rs2306021	0.0262	1.75E-18
15	rs493971	rs11636870	0.0262	1.83E-18
15	rs493971	rs8025438	0.0262	1.86E-18
15	rs1440806	rs1912	0.0262	1.87E-18
15	rs493971	rs7172629	0.0262	1.88E-18
15	rs16954800	rs1614625	0.0262	1.91E-18
15	rs11638578	rs2414844	0.0262	1.97E-18
15	rs11858307	rs16975275	0.0262	2.00E-18
15	rs493971	rs1371385	0.0261	2.05E-18
15	rs493971	rs2073987	0.0261	2.06E-18
15	rs493971	rs7171849	0.0261	2.07E-18
15	rs493971	rs304982	0.0261	2.10E-18
15	rs493971	rs7161806	0.0261	2.10E-18
15	rs493971	rs703237	0.0261	2.11E-18
15	rs7165249	rs16973216	0.0261	2.15E-18
15	rs939981	rs17191491	0.0261	2.22E-18
15	rs6492918	rs13380271	0.0261	2.30E-18
15	rs493971	rs12438071	0.0261	2.37E-18
15	rs12916690	rs17733968	0.0261	2.38E-18
15	rs493971	rs6496026	0.0261	2.44E-18
15	rs493971	rs288438	0.0261	2.50E-18
15	rs493971	rs12900029	0.0261	2.50E-18

15	rs493971	rs12594983	0.0260	2.64E-18
15	rs493971	rs7171473	0.0260	2.77E-18
15	rs493971	rs8031441	0.0260	2.81E-18
15	rs493971	rs7170819	0.0260	2.90E-18
15	rs11072213	rs2573613	0.0260	3.02E-18
15	rs493971	rs4965741	0.0260	3.14E-18
15	rs493971	rs4932444	0.0260	3.15E-18
15	rs17555260	rs6493620	0.0260	3.25E-18
15	rs1269118	rs11638393	0.0260	3.29E-18
15	rs493971	rs1966765	0.0259	3.35E-18
15	rs493971	rs12594008	0.0259	3.39E-18
15	rs8034178	rs7170320	0.0259	3.44E-18
15	rs17762345	rs12148198	0.0259	3.45E-18
15	rs493971	rs17791430	0.0259	3.46E-18
15	rs12593847	rs6494833	0.0259	3.56E-18
15	rs493971	rs2444234	0.0259	3.76E-18
15	rs11633819	rs8042430	0.0259	3.85E-18
15	rs7164801	rs2047223	0.0259	3.87E-18
15	rs493971	rs304939	0.0259	3.91E-18
15	rs493971	rs10152331	0.0259	3.91E-18
15	rs493971	rs7179692	0.0259	3.96E-18
15	rs17443613	rs1479817	0.0259	3.99E-18
15	rs1648245	rs8043067	0.0259	4.06E-18
15	rs493971	rs874955	0.0258	4.42E-18
15	rs493971	rs2652804	0.0258	4.56E-18
15	rs493971	rs7182577	0.0258	4.82E-18
15	rs493971	rs6494387	0.0257	5.61E-18
15	rs493971	rs937927	0.0257	5.69E-18
15	rs493971	rs896366	0.0257	5.81E-18
15	rs493971	rs7170093	0.0257	6.14E-18
15	rs17235812	rs7176517	0.0256	8.45E-18
15	rs493971	rs7172127	0.0254	1.16E-17
15	rs493971	rs12591682	0.0254	1.36E-17
15	rs11070185	rs12595405	0.0254	1.42E-17
15	rs493971	rs6494903	0.0253	1.82E-17
15	rs493971	rs2701419	0.0252	2.00E-17
15	rs493971	rs12914158	0.0252	2.01E-17
15	rs17649891	rs2059927	0.0252	2.41E-17
15	rs493971	rs11636063	0.0251	2.51E-17
15	rs493971	rs7168056	0.0250	3.85E-17
15	rs493971	rs12915892	0.0248	6.01E-17
15	rs493971	rs7181082	0.0237	9.66E-16

15	rs493971	rs207954	0.0233	2.48E-15
18	rs11876341	rs7231241	0.0113	1.06E-02

SNP, single-nucleotide polymorphism; M.I., mutual information.