

**Table 1 All SNPs including novel common variants identified in the re-sequencing of in the COPD Susceptibility Locus, Intervening Region, and the HHIP Gene**

Position(hg18)	rsID (dbSNP 130)	Ref	Alt	MAF	Function*
145654034	rs1032295	T	G	0.3448	intergenic
145654138	rs1032296	T	C	0.4655	intergenic
145654194	rs1032297	A	G	0.3966	intergenic
145654206		C	A	0.01724	intergenic
145654351	rs1512281	A	G	0.3966	intergenic
145655383		A	G	0.08621	intergenic
145655774	rs12504628	T	C	0.3448	intergenic
145656344	rs7697189	G	C	0.3448	intergenic
145656464	rs7681384	T	C	0.4828	intergenic
145656531	rs7698984	C	A	0.4828	intergenic
145656769	rs7677035	A	G	0.4828	intergenic
145656797		C	T	0.01724	intergenic
145658477	rs4835637	A	G	0.4828	intergenic
145658743	rs4835638	A	T	0.1724	intergenic
145659680	rs28420257	A	G	0.1897	intergenic
145659738	rs6829956	C	T	0.4828	intergenic
145659926		G	A	0.01724	intergenic
145660438		G	A	0.01724	intergenic
145661209	rs6854832	C	T	0.1724	intergenic
145661779		G	A	0.01724	intergenic
145661814	rs13116999	G	A	0.4828	intergenic
145662113	rs17019423	T	C	0.03448	intergenic
145662174		C	T	0.01724	intergenic
145662820	rs11938704	A	C	0.1724	intergenic
145663084		G	C	0.03448	intergenic
145663270		A	G	0.01724	intergenic
145663313		C	G	0.01724	intergenic
145663489	rs13107186	A	C	0.4828	intergenic
145667433	rs2130337	G	A	0.1724	intergenic
145669272		T	G	0.03448	intergenic
145670409	rs1512285	A	G	0.4828	intergenic
145671363	rs4835639	G	T	0.4483	intergenic
145671839	rs6821114	A	G	0.4483	intergenic
145672153	rs6821716	A	C	0.4483	intergenic
145672154	rs6843820	G	C	0.4483	intergenic
145672233	rs6845536	C	T	0.4483	intergenic
145672553		G	A	0.03448	intergenic

145673015		C	T	0.01724	intergenic
145673678	rs1489764	T	C	0.4483	intergenic
145673682	rs1489763	C	T	0.3448	intergenic
145673824	rs13129662	C	T	0.3448	intergenic
145674414	rs1489762	T	C	0.3448	intergenic
145674941	rs1489761	G	A	0.4483	intergenic
145674977		A	G	0.1207	intergenic
145675000	rs7435469	C	T	0.3448	intergenic
145675215	rs62345400	C	A	0.06897	intergenic
145675480		C	T	0.01724	intergenic
145675582		C	T	0.01724	intergenic
145676591	rs7692102	A	G	0.4483	intergenic
145676910		C	T	0.01724	intergenic
145677451	rs7674469	C	A	0.4483	intergenic
145677934	rs11936476	T	C	0.3448	intergenic
145679680	rs13147758	A	G	0.3448	intergenic
145679788	rs13148031	A	G	0.3448	intergenic
145680569		T	C	0.1552	intergenic
145680610		A	T	0.01724	intergenic
145680989		T	A	0.01724	intergenic
145681814	rs720484	G	A	0.3448	intergenic
145682038	rs720485	A	C	0.3448	intergenic
145682681	rs6828540	G	A	0.3448	intergenic
145683120		G	C	0.01724	intergenic
145683524	rs6537291	T	A	0.1607	intergenic
145684335	rs2130339	A	G	0.3448	intergenic
145684911	rs36023701	C	G	0.2857	intergenic
145684941	rs6830832	T	G	0.3448	intergenic
145685218	rs11938745	T	C	0.3448	intergenic
145685651	rs2130338	G	A	0.2069	intergenic
145686128	rs2220516	C	G	0.2069	intergenic
145686601	rs2220515	T	C	0.2069	intergenic
145686647		C	T	0.01724	intergenic
145686662	rs12506874	A	T	0.3448	intergenic
145688134		T	G	0.01724	intergenic
145688241	rs7663578	G	A	0.4483	intergenic
145688295	rs7663740	G	T	0.4483	intergenic
145688539	rs72731595	T	A	0.08621	intergenic
145688823	rs62346060	G	A	0.2241	intergenic
145689418	rs6537292	G	T	0.3448	intergenic
145690054	rs6828982	T	C	0.4483	intergenic

145690107	rs6829184	T	A	0.3448	intergenic
145690695	rs12511230	A	T	0.3448	intergenic
145690918	rs10028899	A	T	0.05172	intergenic
145691395	rs6831503	A	G	0.3448	intergenic
145692216	rs13113445	T	G	0.3333	intergenic
145692443	rs1996022	A	C	0.2241	intergenic
145692536		G	C	0.03448	intergenic
145692646	rs1828590	G	A	0.4211	intergenic
145693747	rs1489760	G	A	0.3448	intergenic
145693923	rs1489759	A	G	0.3448	intergenic
145694794		C	T	0.01724	intergenic
145697499	rs1813903	C	G	0.3448	intergenic
145697651	rs995758	C	T	0.3448	intergenic
145697708		C	T	0.03448	intergenic
145698112	rs12509311	C	T	0.3448	intergenic
145698227	rs4834988	C	A	0.431	intergenic
145698589	rs11100860	A	G	0.3448	intergenic
145698617	rs28758624	G	A	0.2241	intergenic
145699211	rs6537293	A	G	0.3448	intergenic
145699213	rs6537294	C	A	0.3448	intergenic
145699265		A	G	0.01724	intergenic
145699330	rs6842889	T	C	0.3448	intergenic
145699790	rs10519717	T	C	0.2241	intergenic
145700230	rs1828591	A	G	0.3448	intergenic
145701671	rs13435341	C	G	0.2241	intergenic
145701693	rs28626624	C	T	0.3448	intergenic
145701997	rs1565330	C	T	0.3448	intergenic
145704088	rs12510044	C	G	0.431	intergenic
145704373	rs1980056	C	A	0.3448	intergenic
145704968		A	G	0.01724	intergenic
145705010		C	T	0.01724	intergenic
145705011	rs1489766	G	A	0.01724	intergenic
145705188	rs1980057	C	T	0.3448	intergenic
145705365	rs7655625	T	C	0.3448	intergenic
145705839	rs13118928	A	G	0.3448	intergenic
145707384	rs6537296	A	G	0.3448	intergenic
145707784	rs1542725	C	T	0.3448	intergenic
145708349		C	A	0.01724	intergenic
145708547	rs13113591	C	T	0.3448	intergenic
145708548	rs13140176	A	G	0.3448	intergenic
145708778	rs11940733	G	A	0.3448	intergenic

145708826		G	A	0.01724	intergenic
145709809	rs12501071	C	T	0.3448	intergenic
145710731	rs1512288	G	A	0.3448	intergenic
145711352		A	C	0.1724	intergenic
145711453	rs6817273	T	C	0.3448	intergenic
145711499		T	C	0.01724	intergenic
145713855		C	T	0.01724	intergenic
145716391	rs2175586	A	G	0.03448	intergenic
145717824		T	C	0.06897	intergenic
145717862	rs10029430	G	A	0.431	intergenic
145718193		C	T	0.01724	intergenic
145718478	rs17019496	G	A	0.1724	intergenic
145718654	rs17019499	C	A	0.1724	intergenic
145718839	rs34544231	C	T	0.05172	intergenic
145718923		C	A	0.05172	intergenic
145720046	rs13136959	T	C	0.05172	intergenic
145720563		C	T	0.01724	intergenic
145720651	rs1844430	T	C	0	intergenic
145720924		C	T	0.05172	intergenic
145720940		T	A	0.01724	intergenic
145721012		C	T	0.01724	intergenic
145721479	rs6537297	C	T	0.4138	intergenic
145721571	rs71614512	G	A	0.05172	intergenic
145722024	rs71614513	T	C	0.05172	intergenic
145723621		T	G	0.01724	intergenic
145725088	rs10013495	C	T	0.2241	intergenic
145725906	rs13141641	T	C	0.3621	intergenic
145726008	rs6852830	C	A	0.2414	intergenic
145726208	rs56984525	A	G	0.1552	intergenic
145726321	rs6537298	C	T	0.4138	intergenic
145726726		A	T	0.01724	intergenic
145727290	rs35742577	C	T	0.2241	intergenic
145727407		G	A	0.1724	intergenic
145728341	rs1828589	T	C	0.2241	intergenic
145728715		A	T	0.01724	intergenic
145729198	rs35800482	A	G	0.05172	intergenic
145730172		C	G	0.01724	intergenic
145730490	rs11724319	A	G	0.3448	intergenic
145730644	rs1996020	A	C	0.2241	intergenic
145731025	rs1996021	T	C	0.2241	intergenic
145731047	rs71614516	A	C	0.05172	intergenic

145731325	rs7670758	A	G	0.4138	intergenic
145731516		G	A	0.01724	intergenic
145732023		C	T	0.03448	intergenic
145732503	rs7677662	A	G	0.1724	intergenic
145732629	rs7700244	C	T	0.1724	intergenic
145733911	rs1398243	G	A	0.05172	intergenic
145734322	rs7666523	C	T	0.1724	intergenic
145734392		A	G	0.01724	intergenic
145735017		C	T	0.01724	intergenic
145735219	rs1542726	A	C	0.4138	intergenic
145735828	rs1489765	C	T	0.431	intergenic
145737028	rs2353397	C	T	0.4655	intergenic
145737031	rs72733512	A	G	0.01724	intergenic
145737581		C	T	0.03448	intergenic
145737762	rs17019517	G	A	0.03448	intergenic
145740058	rs4835180	A	G	0.4821	intergenic
145740232		T	A	0.01786	intergenic
145740639	rs10023833	G	C	0.4821	intergenic
145741153	rs12648786	G	A	0.4107	intergenic
145741317	rs2035901	A	G	0.4821	intergenic
145741898	rs72617417	A	G	0.03448	intergenic
145742113	rs1994812	G	A	0.03571	intergenic
145742208	rs2353398	T	A	0.4464	intergenic
145742521	rs13103733	C	T	0.375	intergenic
145742595		C	T	0.03571	intergenic
145743331		C	T	0.01786	intergenic
145743922		T	C	0.01786	intergenic
145744125	rs62346065	T	C	0.07143	intergenic
145744232		A	G	0.01786	intergenic
145744857	rs56095409	G	T	0.5	intergenic
145745306	rs6814119	C	T	0.4464	intergenic
145745886		T	A	0.01786	intergenic
145746365		A	G	0.01786	intergenic
145746542		T	C	0.01724	intergenic
145746789	rs6856849	T	G	0.4286	intergenic
145747735		T	C	0.01786	intergenic
145747813		C	T	0.01786	intergenic
145747854		C	T	0.01786	intergenic
145749044	rs4835181	G	A	0.4483	intergenic
145749153	rs10011200	C	G	0.4483	intergenic
145749735	rs2035744	T	C	0.01724	intergenic

145750061	rs7654905	C	T	0.01724	intergenic
145750256	rs7655287	C	A	0.01724	intergenic
145750464		G	A	0.01724	intergenic
145750470		C	T	0.03448	intergenic
145750648	rs11931085	G	A	0.01724	intergenic
145750682		A	C	0.05172	intergenic
145751153		C	T	0.01724	intergenic
145751295	rs2883154	C	T	0.05172	intergenic
145751497	rs57271340	C	T	0.03448	intergenic
145751498		G	A	0.01724	intergenic
145751691	rs72733517	T	C	0.01724	intergenic
145753806		C	G	0.01724	intergenic
145755419		T	C	0.05172	intergenic
145755421	rs7671078	T	C	0.03448	intergenic
145755746		T	G	0.01724	intergenic
145755786	rs7692554	G	A	0.4828	intergenic
145756454		C	G	0.01724	intergenic
145756696	rs12711419	C	T	0.05172	intergenic
145757198	rs13327924	G	A	0.05172	intergenic
145757199		G	A	0.03448	intergenic
145757300	rs11947381	T	C	0.4483	intergenic
145757826	rs28703835	A	G	0.05172	intergenic
145758839		C	T	0.01724	intergenic
145760273		G	A	0.03448	intergenic
145761314	rs11934366	T	G	0.01724	intergenic
145761343	rs13146616	C	T	0.4828	intergenic
145762118	rs7699073	C	G	0.4828	intergenic
145762324	rs2942220	C	T	0.01724	intergenic
145762646	rs2575577	G	C	0.01724	intergenic
145762779	rs13119931	G	C	0.4828	intergenic
145763226	rs17720281	C	T	0.5	intergenic
145763838		T	G	0.03448	intergenic
145764197		C	T	0.01724	intergenic
145764286	rs17776795	A	G	0.5	intergenic
145764385	rs2575574	A	G	0.05172	intergenic
145764507		A	G	0.01724	intergenic
145764881	rs72617418	C	T	0.03448	intergenic
145765906	rs2255895	G	C	0.4138	intergenic
145765990	rs2639582	A	G	0.4483	intergenic
145766316	rs7679425	C	T	0.5	intergenic
145766635	rs72733520	A	G	0.4483	intergenic

145767351		A	G	0.01724	intergenic
145768383	rs2575570	T	G	0.01724	intergenic
145769418	rs34792358	G	C	0.4828	intergenic
145769718		G	A	0.01724	intergenic
145769775	rs62346124	T	C	0.5	intergenic
145772179	rs2575572	T	C	0.4483	intergenic
145772268	rs58968811	G	A	0.03448	intergenic
145772500		G	A	0.03448	intergenic
145773215		G	C	0.03448	intergenic
145773975		C	T	0.03448	intergenic
145775132	rs61420014	T	C	0.03448	intergenic
145775139		T	C	0.01724	intergenic
145775235		T	C	0.01724	intergenic
145775239		A	C	0.08621	intergenic
145775570		A	G	0.01724	intergenic
145775676	rs6814581	C	T	0.5	intergenic
145776620	rs72733521	G	A	0.3793	intergenic
145777101	rs11100862	T	A	0.5	intergenic
145777395	rs72617419	C	T	0.03448	intergenic
145779287		T	C	0.08621	intergenic
145779448	rs34247320	C	G	0.3793	intergenic
145779616	rs62346126	C	A	0.1207	intergenic
145779782	rs67904839	G	A	0.5	intergenic
145780072	rs2353399	T	A	0	intergenic
145780354	rs12500932	C	A	0.4828	intergenic
145781326		C	T	0.08621	intergenic
145781478	rs62346127	T	C	0.3793	intergenic
145781892		A	T	0.01724	intergenic
145781907	rs1398244	C	T	0.3793	intergenic
145781981	rs34939090	C	G	0.4828	intergenic
145782862		G	C	0.01724	intergenic
145783618		T	C	0.06897	intergenic
145783977		A	G	0.1034	intergenic
145783995	rs11730787	G	A	0.3793	intergenic
145784429	rs72733526	G	C	0.01724	intergenic
145784566	rs7680661	G	A	0.08621	intergenic
145784618	rs72617420	A	C	0.03448	intergenic
145785276	rs6845999	C	T	0.4828	near-gene-5
145785709		G	T	0.1034	near-gene-5
145785835		G	A	0.03448	near-gene-5
145785915		G	A	0.08929	near-gene-5

145785927	rs1355603	T	C	0.09615	near-gene-5
145785988		A	T	0.08929	near-gene-5
145786237		G	C	0.01923	near-gene-5
145786298	rs13125694	C	T	0.4821	near-gene-5
145786314	rs13106087	T	C	0.1786	near-gene-5
145786921	rs12507427	T	A	0.4821	utr-5
145787802	rs7689420	T	C	0.1	intron
145787901	rs72617421	G	A	0.03571	intron
145787975		C	T	0.01852	intron
145788132	rs72617422	A	C	0.03571	intron
145789052		T	C	0.03448	intron
145789142	rs13146972	C	T	0.4828	intron
145789282	rs1109181	C	A	0.03448	intron
145791144	rs13136840	A	C	0.4828	intron
145791496	rs7675744	T	C	0.4483	intron
145792051	rs7676399	A	T	0.4643	intron
145793646	rs1844428	A	G	0.08929	intron
145793689	rs1489758	G	T	0.3966	intron
145794227		C	G	0.1429	intron
145794229		C	T	0.3333	intron
145796008	rs2220514	G	A	0.5	intron
145796106	rs2635680	T	C	0	intron
145796820	rs2035742	A	G	0.03448	intron
145797086	rs2035900	T	C	0.431	intron
145797275		A	G	0.01724	intron
145797852		G	A	0.01724	intron
145798117	rs17720753	T	C	0.4828	intron
145798249	rs62346130	C	T	0.4828	intron
145798974		T	C	0.01724	intron
145799040	rs7680782	T	C	0.431	intron
145799116		G	A	0.01724	intron
145799357	rs6537301	G	A	0.431	intron
145799622		T	C	0.01724	intron
145799740	rs1355601	C	A	0.4828	intron
145799771		C	T	0.01724	intron
145800035	rs1355602	A	C	0.431	intron
145800089		G	C	0.01724	intron
145800908		C	A	0.1552	intron
145801046	rs1387631	T	C	0.431	intron
145801059		A	T	0.01724	intron
145801176		A	G	0.01724	intron



145801363		A	G	0.03448	intron
145801444	rs60684117	A	T	0.03448	intron
145801986	rs2306924	A	G	0.431	intron
145802270	rs13145247	T	C	0.431	intron
145803625	rs58797593	T	G	0.03448	intron
145803657	rs7687599	T	G	0.5	intron
145804495		G	T	0.03448	intron
145804804	rs6852346	A	T	0.5	intron
145804971	rs6825848	G	A	0.5	intron
145805247	rs62346131	T	C	0.01724	intron
145805358		C	A	0.01724	intron
145805493	rs12501043	T	C	0.5	intron
145805909	rs982903	A	G	0.5	intron
145806303		A	G	0.03448	intron
145806350	rs982902	G	A	0.5	intron
145807566	rs6537302	A	T	0.5	intron
145807674		G	T	0.03448	intron
145808355	rs57498151	T	A	0.03448	intron
145808421	rs55645717	A	G	0.03448	intron
145808682		G	A	0.03448	intron
145808703		G	T	0.01724	intron
145809294	rs6537303	C	A	0.5	intron
145809455	rs6537304	C	T	0.431	intron
145809721		A	T	0.01724	intron
145809895	rs4834989	A	T	0.03448	intron
145810383	rs7340949	A	G	0.431	intron
145810511	rs6537305	A	G	0.5	intron
145810526		G	A	0.01724	intron
145810876	rs6832061	C	A	0.5	intron
145811809		T	C	0.01724	intron
145812136	rs17777628	G	A	0.03448	intron
145812478	rs1844429	T	C	0.3654	intron
145812532		G	T	0.02632	intron
145813124	rs11938839	G	C	0.5	intron
145813151		G	C	0.03448	intron
145813786		G	C	0.01724	intron
145814663		C	T	0.01724	intron
145815643		C	T	0.03448	intron
145816525	rs60776266	G	C	0.03448	intron
145817209	rs2055059	A	G	0.3276	intron
145817765	rs6826476	C	T	0.2414	intron

145818376		C	T	0.03448	intron
145818984	rs11946517	G	C	0.3276	intron
145819358	rs2131354	G	A	0.4138	intron
145819530	rs34671273	G	C	0.03448	intron
145819682		C	T	0.01724	intron
145820220		A	G	0.01724	intron
145821313	rs6537307	A	G	0.3793	intron
145821417		C	T	0.01724	intron
145821574	rs1472172	C	A	0.03448	intron
145821947	rs2639583	T	C	0.1034	intron
145822218	rs72948477	G	T	0.03448	intron
145822313		C	T	0.03448	intron
145824303	rs6537308	G	T	0.3621	intron
145824475	rs2575580	A	G	0.1034	intron
145824483	rs6819412	T	C	0.3966	intron
145824525	rs6537309	T	C	0.3621	intron
145824723	rs6819982	T	C	0.431	intron
145825170		C	T	0.03448	intron
145825471	rs13106160	C	T	0.3621	intron
145825676		G	A	0.03448	intron
145825759		A	C	0.03448	intron
145827296	rs7699480	C	T	0.3621	intron
145827313		A	G	0.01724	intron
145827352	rs7698158	G	A	0.3621	intron
145828084		A	G	0.01724	intron
145829509		A	C	0.03448	intron
145830017		G	A	0.01724	intron
145832001	rs63121460	C	A	0.3966	intron
145832002	rs12511407	A	T	0.3966	intron
145832872		T	C	0.03448	intron
145833001	rs13146352	A	G	0.3966	intron
145833170	rs17721599	C	T	0.1034	intron
145833257	rs6812830	G	A	0.3966	intron
145833352		G	C	0.03448	intron
145834434	rs13131837	G	A	0.4138	intron
145836405		C	T	0.03448	intron
145837198	rs7439494	G	A	0.3793	intron
145837396	rs1907867	C	T	0.3793	intron
145838169	rs17721701	T	C	0.3793	intron
145838863	rs1492819	T	C	0.4138	intron
145840004	rs34958276	G	A	0.3793	intron

145840778		G	A	0.08621	intron
145841129		A	G	0.01724	intron
145841650		G	A	0.08621	intron
145842101	rs12502033	T	C	0.3793	intron
145842288		G	C	0.01724	intron
145842557	rs6838704	G	A	0.3621	intron
145842611	rs6822018	T	C	0.3621	intron
145845180	rs7654947	C	T	0.3448	intron
145845546	rs6812389	C	G	0.3793	intron
145845595		A	C	0.01724	intron
145845825		C	T	0.03448	intron
145845864	rs6817771	C	G	0.3448	intron
145846462	rs6817556	G	A	0.3448	intron
145846483		G	A	0.03448	intron
145846847	rs3733422	C	T	0.3448	intron
145846855	rs3733423	G	T	0.3448	intron
145846908	rs3733424	A	G	0.3448	intron
145847421		G	A	0.05172	intron
145848345		T	C	0.01724	intron
145848376		T	C	0.01724	intron
145849080	rs2254637	A	T	0	intron
145849440		G	T	0.03448	intron
145851049		T	C	0.03448	intron
145851098	rs6846476	T	G	0.3448	intron
145852980	rs11100863	A	G	0.01724	intron
145853852		A	C	0.03448	intron
145856182	rs6537310	T	C	0.3448	intron
145856222		G	A	0.03448	intron
145856525	rs1907866	A	T	0.3966	intron
145856899	rs33915726	T	C	0.3448	intron
145857286		C	A	0.01724	intron
145857628	rs1389029	C	T	0.3793	intron
145858178		T	C	0.03448	intron
145858483	rs6815058	G	T	0.3448	intron
145858723		G	A	0.01724	intron
145858768	rs2087826	G	A	0.3793	intron
145859795	rs2276934	C	G	0.3448	intron
145859809		G	A	0.01724	intron
145860068		C	T	0.03448	intron
145860435	rs923783	A	G	0.3448	intron
145862529	rs6854783	G	A	0.3448	intron

145862776	rs6855202	G	C	0.3448	intron
145862936	rs6843518	T	C	0.3448	intron
145865299	rs9759612	A	T	0.4773	intron
145866004	rs1492818	G	A	0.3276	intron
145866612		G	A	0.01724	intron
145866697		A	T	0.01724	intron
145867482	rs923782	T	C	0.3448	intron
145868233	rs1552792	C	T	0.3621	intron
145868491		G	T	0.03448	intron
145868692	rs2353915	C	T	0.3448	intron
145869471	rs1492820	G	A	0.3793	intron
145870454	rs11100864	C	T	0.3448	intron
145870597	rs11100865	A	G	0.3448	intron
145871113	rs6857302	A	G	0.3448	intron
145871507		T	C	0.01724	intron
145873096		C	T	0.01724	intron
145873097		A	C	0.01724	intron
145873144	rs6827641	T	C	0.3793	intron
145873947	rs7692915	G	T	0.3966	intron
145873977		G	T	0.01724	intron
145874148		A	G	0.03448	intron
145874261		G	A	0.01724	intron
145874346	rs11733546	C	T	0.03448	intron
145874363	rs11100866	T	C	0.3448	intron
145874558		A	G	0.03448	intron
145874941	rs72718205	T	G	0.03448	intron
145874982	rs1472174	T	G	0.3448	intron
145875661	rs11100867	T	C	0.3448	intron
145876352		T	C	0.01724	intron
145876616	rs11100868	T	C	0.3448	intron
145877736	rs6826012	C	T	0.3966	intron
145877879	rs2639576	T	C	0.4138	intron
145878514	rs11727676	T	C	0.08621	coding-synonymous
145878648	rs62344037	C	T	0.1379	utr-3
145881101	rs11942655	G	C	0.06897	near-gene-3
145881360	rs2639577	G	A	0	intergenic
145881365		G	T	0.03448	intergenic
145881418		G	A	0.03448	intergenic
145882272	rs2639578	C	A	0	intergenic
145882280	rs2639579	A	G	0	intergenic
145882292	rs7666450	C	T	0.4655	intergenic

145882608		G	A	0.03448	intergenic
145882664		C	T	0.2931	intergenic
145882666		C	T	0.3276	intergenic
145882863	rs2575576	A	G	0	intergenic
145883248	rs72718211	G	A	0.4655	intergenic

\*SeattleSeq: <http://gvs-p.gs.washington.edu/SeattleSeqAnnotation/>

**Supplemental Table 2.** Oligonucleotides used in different assays

Applications	Primer name	Primer sequence
3C-PCR	Constant primer	CTGAGACGATTCTCCGTCATTTTGTA CA
	Target primer 2	AACCTGGCCTCTATTTGAACAGCTAGCA
	Target primer 4	CTTCAGGTCTACTAATCTCTACCCCTTACA
	Target primer 9	GGCTCCCGATTGTCAAAGAGACACTGGA
	Target primer 10	AATATACACAGCGGAGAGCCCTCACCA
	Target primer 17	CAAGTGA ACTTGCCTGTGACCTTTCTTC
	Target primer 20	TCCAGCTGAGTGCTGTTAGGCCATCCA
	Target primer 21	TTGGTAACTGGGCGTGCTATAACCCTGTA
	Target primer 22	AGGGTTAGATAGTGGAAGCACCCCAGA
	Target primer 24	GAGTCTCCAAACCATCTCAGCCTACTCAA
	Target primer 27	CCATAGTATGACAGTCTTCTGCATGCA
ChIP-PCR	Control F	CCAATGCCAGTGTACCGTTTATGG
	Control R	TCAACCCTGACACCTGTGGTTTCT
	SNP region F	TGCCTGTGCTTGCTCACACTTAGA
	SNP region R	GCCCACGTCAAACACACACCTAAA
EMSA	rs1542725C F	TGAATTTGGGAGGGGACACAAAC
	rs1542725C R	GTTTGTGTCCCCTCCCAAATTCA
	rs1542725T F	TGAATTTGGGAAGGGACACAAAC
	rs1542725T R	GTTTGTGTCCCTTCCCAAATTCA
	6bp mutation F	TGAATTTGGTCATTTACACAAAC
	6bp mutation R	GTTTGTGTAATGACCAAATTCA
	Sp1 consensus seq-F	ATTCGATCGGGGCGGGGCGAGC
	Sp1 consensus sequence-R	GCTCGCCCCGCCCCGATCGAAT
	Non-identical competitor-F	AGAAATTCTCCCTGGATTTTCC
Non-identical competitor-R	GGAAAATCCAGGGAGAATTTCT	

### Supplemental Table 3

Resequencing in 7k COPD GWAS SNP region on chromosome 4q31 identified 13 common SNPs. SNPs in bold are two SNPs located in 2.4k enhancer region.

rsID (dbSNP 130)	Position (hg18)	Reference	Alternate	MAF
rs13435341	145701671	C	G	0.22
rs28626624	145701693	C	T	0.34
rs1565330	145701997	C	T	0.34
rs12510044	145704088	C	G	0.57
rs1980056	145704373	C	A	0.34
N/A	145704968	A	G	0.02
N/A	145705010	C	T	0.02
rs1489766	145705011	G	A	0.02
rs1980057	145705188	C	T	0.34
rs7655625	145705365	T	C	0.34
rs13118928	145705839	A	G	0.34
<b>rs6537296</b>	<b>145707384</b>	<b>A</b>	<b>G</b>	<b>0.34</b>
<b>rs1542725</b>	<b>145707784</b>	<b>C</b>	<b>T</b>	<b>0.34</b>

#### Supplemental Table 4

The LD structure of three SNPs rs13118928, rs6537296 and rs1542725 in the Poland Case-Control Study Population

SNPs	$R^2$	$D'$
rs13118928,rs6537296	0.997	1.0
rs13118929, rs1542725	1.0	1.0
rs6537296, rs1542725	0.997	1.0



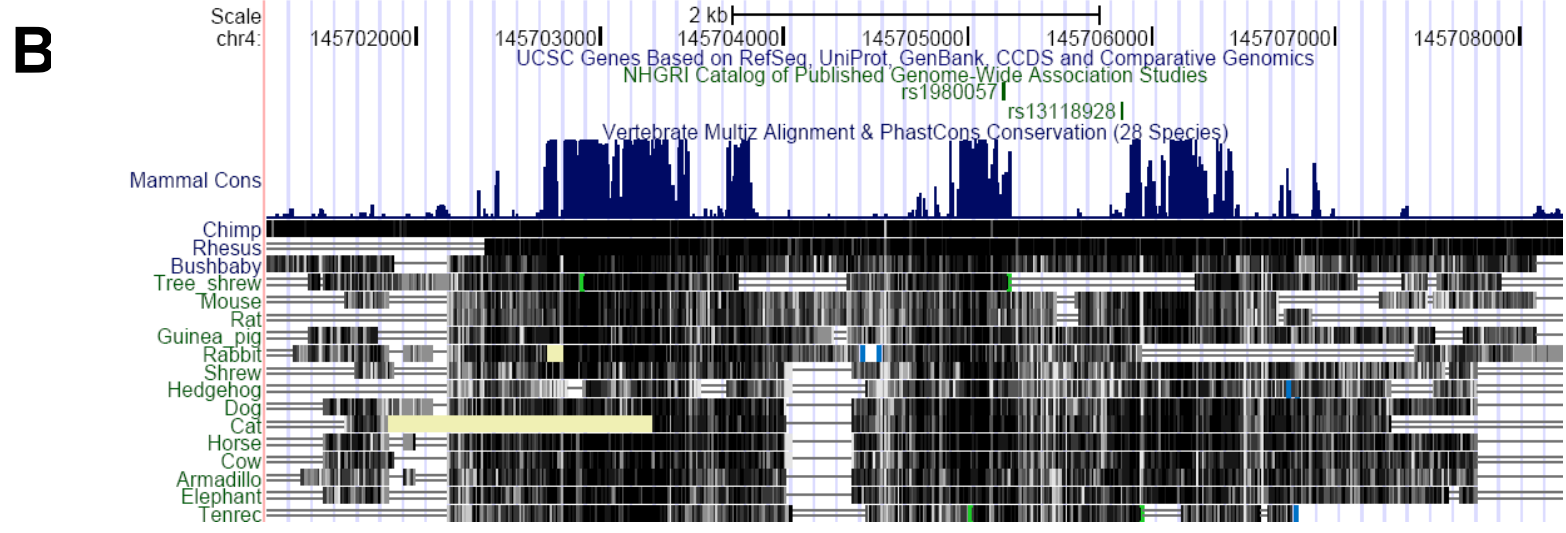
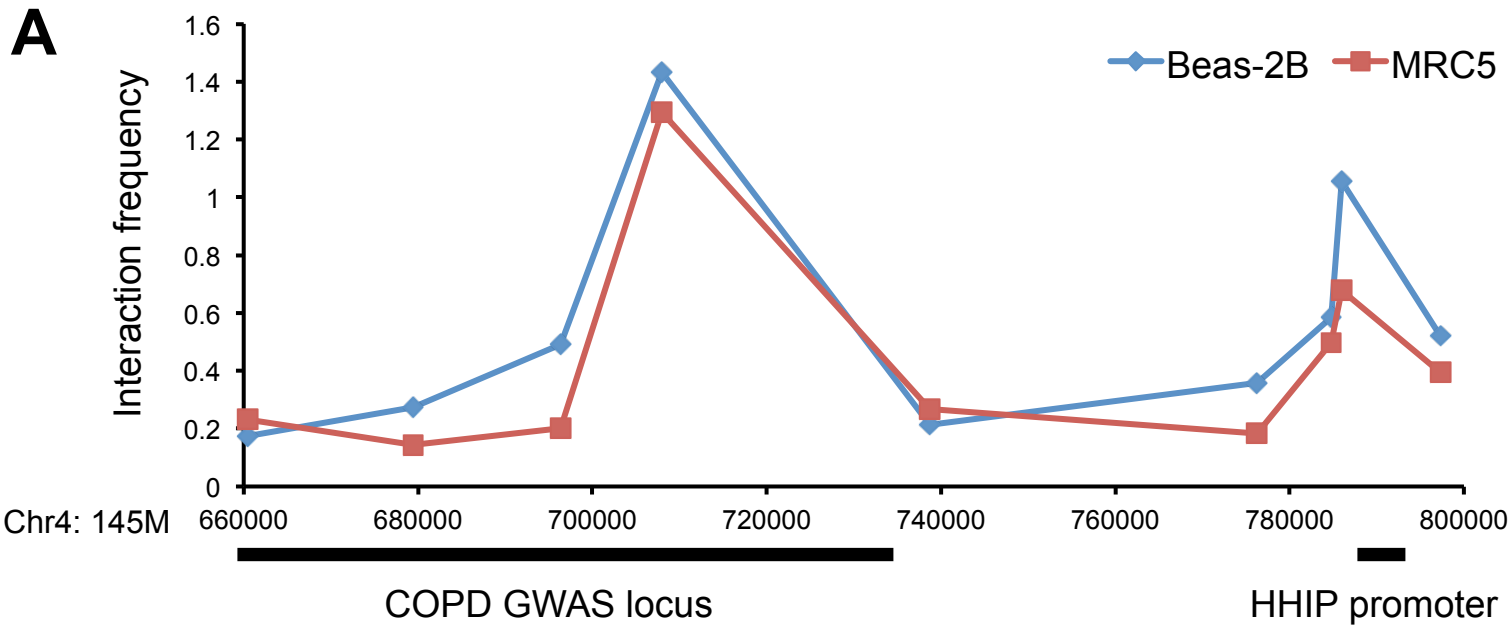
**Supplemental Figure 1.** A. Biological replicates of 3C assay in Beas-2B cells and MRC5 cells demonstrate a similar pattern of long-range interactions of COPD GWAS SNP region with the *HHIP* promoter. The graph demonstrates the mean of normalized 3C interaction frequencies between the constant fragment containing the *HHIP* promoter and each target fragment from triplicate PCR. The y-axis refers to the number of molecules in 3C libraries from each interrogated ligation product. B, Representation of the 7kb interaction region from the UCSC Human Genome Browser. From top to bottom, tracks are shown displaying information about GWAS hits, overall multi-species sequence conservation, and pair-wise sequence conservation between human and 14 placental mammals.

**Supplemental Figure 2 A.** The minimal COPD GWAS SNP region (~500bp around two key SNPs, light purple column) cloned at forward orientation (>>>) and reverse orientation (<<<) showed enhancer activity for the *HHIP* promoter (“control”, orange) measured by dual-luciferase in MRC5 cells. Shown are ratios of firefly luciferase expression to *Renilla* luciferase expression normalized to the mean ratio from the control construct. Geometric means and standard errors are from three independent repeats with at least triplicate wells for each repeat.

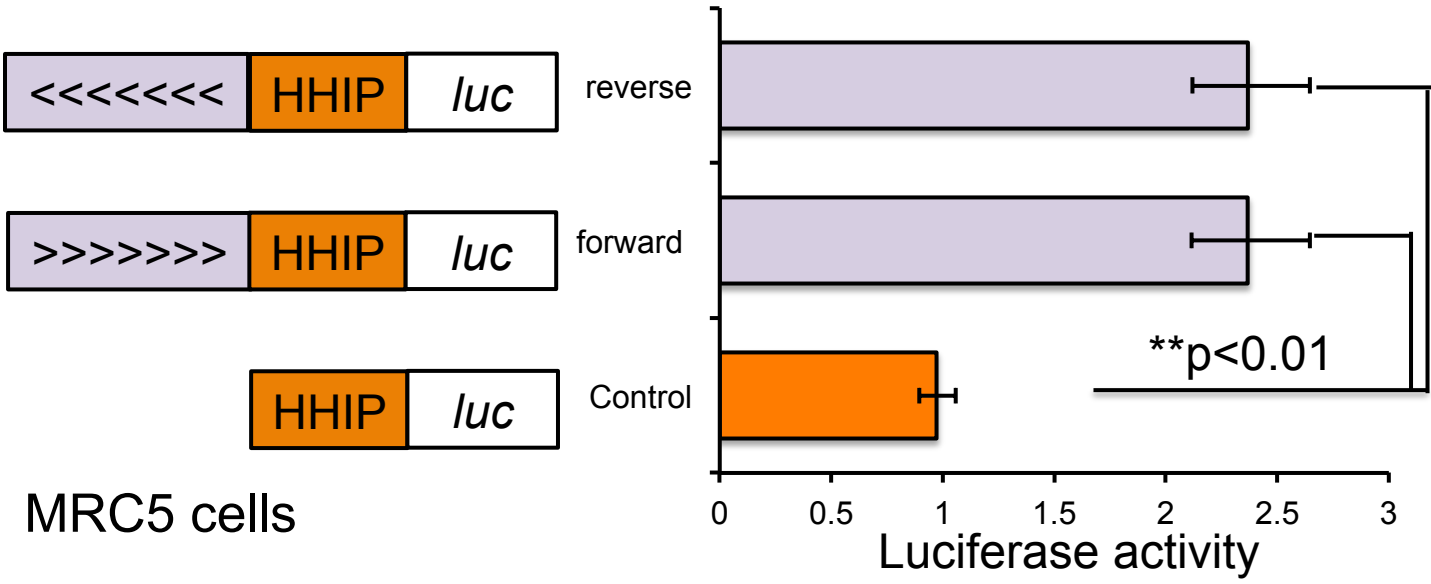
**Supplemental Figure 3.** A. Multi-sequence alignments of the consensus Sp3-binding sequences flanking rs1542725 (the area in box) from the UCSC Human Genome Browser. The position of rs1542725 C/T in each alignment is indicated by a vertical arrow; dots indicate bases that are identical to the human reference sequence and dashes represent gaps within the alignments. B. Electrophoretic mobility shift analysis (EMSA) of the same amount of rs1542725C probe (radiolabeled oligonucleotides, rs15C) incubated with nuclear extract from Beas-2B cells and

either 100X competitors (unlabeled oligonucleotides) or indicated antibodies. Arrows denote specific nuclear proteins bound to the probe. WT: competitor with identical sequence (lane 2); NC: competitor with non-identical sequence; Sp1/3: competitor with Sp1/Sp3 consensus sequence (lane 3); MT: competitor with 6bp mutation surrounding rs1542725 (lane 4). Sp3 supershift band is denoted by \* in red.

Supplemental figure 1



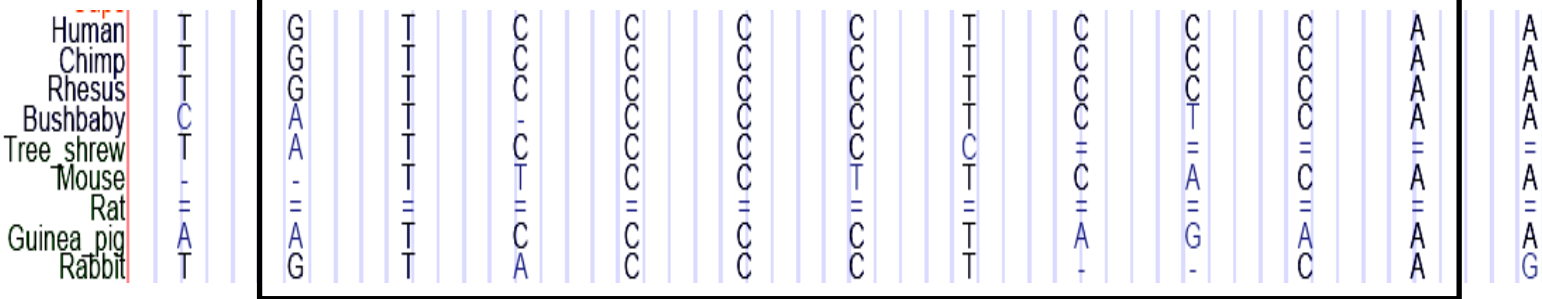
Supplemental Figure 2



Supplemental figure 3

**A**

rs1542725



**B**

Lane number	1	2	3	4	5	6	7	8
rs15C probe	+	+	+	+	+	+	+	+
Competitor	-	WT	NC	MT	Sp1/3	-	-	-
Antibody	-	-	-	-	-	Sp1	Sp3	ctrl

