

Transcript ENST00000316623.5

Chromosome	Position	rsIDs	Reference	Alternate	HGVS Consequence
15	48707755		C	T	p.Gly2677Ser
15	48707808	rs759908796	C	T	p.Cys2659Tyr
15	48707842	rs1289824154	C	A	p.Asp2648Tyr
15	48719832	rs1295154212	G	A	p.Pro2379Leu
15	48719844	rs756819562	C	A	p.Cys2375Phe
15	48719865	rs758077968	C	T	p.Gly2368Glu
15	48720668	rs370283154	T	A	p.Asp2291Val
15	48726850	rs193922225	C	A	p.Gly2186Val
15	48733980	rs1310781536	C	A	p.Gly2034Val
15	48734037	rs746719632	T	A	p.Asp2015Val
15	48737606	rs1242627780	A	G	p.Tyr1962His
15	48737608	rs770219790	C	A	p.Gly1961Val
15	48744873	rs761857514	C	T	p.Glu1811Lys
15	48748870	rs746907055	C	T	p.Gly1796Arg
15	48755326	rs1064797059	C	A	p.Gly1726Val
15	48757821	rs1343255869	A	C	p.Phe1629Cys
15	48757842	rs1445988459	C	T	p.Cys1622Tyr
15	48760152	rs1396017880	C	T	p.Cys1577Tyr
15	48762886	rs780479561	G	C	p.Phe1468Leu
15	48764781	rs542680905	A	G	p.Phe1435Leu
15	48764802	rs1258352189	G	A	p.Arg1428Cys
15	48766490	rs1352478541	C	A	p.Cys1391Phe
15	48766505	rs794728219	G	A	p.Ser1386Phe
15	48766566	rs763449629	C	G	p.Glu1366Gln
15	48773885	rs1406315227	A	T	p.Tyr1311Asn
15	48773911	rs777932343	G	A	p.Ser1302Leu
15	48779572	rs372404949	C	T	p.Gly1134Arg
15	48782144	rs140592	A	G	p.Cys996Arg
15	48787409	rs753713022	T	G	p.Glu863Ala
15	48796019	rs771202007	C	T	p.Gly693Glu
15	48797272	rs1478695794	C	T	p.Cys637Tyr
15	48797341	rs762427180	A	G	p.Ile614Thr
15	48805823	rs1156747241	C	A	p.Cys504Phe
15	48805857	rs1281297180	C	T	p.Glu493Lys
15	48812870	rs1274000764	G	C	p.Pro378Arg
15	48818447	rs1429410032	C	A	p.Asp290Tyr
15	48818452	rs565078451	T	A	p.Asp288Val
15	48818452	rs565078451	T	C	p.Asp288Gly
15	48826312	rs534859193	C	T	p.Gly276Glu
15	48826312	rs534859193	C	A	p.Gly276Val
15	48826326	rs765692335	G	C	p.Cys271Trp
15	48826399	rs749264206	A	C	p.Val247Gly

15	48703191	rs772219204	T	C	p.His2871Arg
15	48703210	rs775732785	T	C	p.Lys2865Glu
15	48703211	rs1281410164	C	T	p.Met2864Ile
15	48703211	rs1281410164	C	A	p.Met2864Ile
15	48703221	rs747213800	T	G	p.Asn2861Thr
15	48703221	rs747213800	T	A	p.Asn2861Ile
15	48703234	rs1214727552	C	T	p.Glu2857Lys
15	48703239	rs762079635	C	T	p.Ser2855Asn
15	48703245	rs765591910	T	G	p.Tyr2853Ser
15	48703248	rs773653099	T	C	p.Asp2852Gly
15	48703252	rs371939796	T	C	p.Lys2851Glu
15	48703260	rs765839151	T	A	p.Lys2848Ile
15	48703260	rs765839151	T	G	p.Lys2848Thr
15	48703261	rs199846998	T	G	p.Lys2848Gln
15	48703265	rs778948309	T	G	p.Glu2846Asp
15	48703266	rs754570125	T	C	p.Glu2846Gly
15	48703274	rs1411645863	G	T	p.Asn2843Lys
15	48703279	rs755903722	G	A	p.Leu2842Phe
15	48703280	rs567107508	T	A	p.Glu2841Asp
15	48703288	rs749186061	T	G	p.Lys2839Gln
15	48703294	rs1306203757	A	G	p.Tyr2837His
15	48703299	rs757290299	G	A	p.Pro2835Leu
15	48703303	rs1284038548	T	C	p.Thr2834Ala
15	48703305	rs549604448	C	T	p.Ser2833Asn
15	48703308	rs571906167	C	T	p.Ser2832Asn
15	48703309	rs376933421	T	C	p.Ser2832Gly
15	48703333	rs1485832738	C	A	p.Ala2824Ser
15	48703339	rs763350939	G	C	p.Pro2822Ala
15	48703339	rs763350939	GCTT	G	p.Lys2821del
15	48703341	rs766852785	T	C	p.Lys2821Arg
15	48703354	rs148741353	A	C	p.Phe2817Val
15	48703381	rs1377343829	G	T	p.Gln2808Lys
15	48703417	rs112310699	C	T	p.Glu2796Lys
15	48703418	rs138574576	G	C	p.Ile2795Met
15	48703423	rs1242424896	A	T	p.Leu2794Met
15	48703434	rs1271078955	T	C	p.His2790Arg
15	48703437	rs1342079271	T	C	p.Asn2789Ser
15	48703440	rs143007898	G	A	p.Thr2788Met
15	48703440	rs143007898	G	C	p.Thr2788Arg
15	48703447	rs781352764	T	C	p.Thr2786Ala
15	48703449	rs1335174952	G	T	p.Thr2785Lys
15	48703453	rs1215517886	G	A	p.Leu2784Phe
15	48703476	rs748327743	C	T	p.Arg2776Gln
15	48703477	rs137854466	G	C	p.Arg2776Gly

15	48703477	rs137854466	G	A	p.Arg2776Ter
15	48703489	rs778014965	T	C	p.Ser2772Gly
15	48703492	rs193922244	C	T	p.Val2771Ile
15	48703495	rs774658482	G	A	p.His2770Tyr
15	48703501	rs1400353373	T	C	p.Ile2768Val
15	48703503	rs536503540	T	C	p.Asn2767Ser
15	48703504	rs771437236	T	C	p.Asn2767Asp
15	48703510	rs1008093328	C	T	p.Ala2765Thr
15	48703516	rs775172479	T	C	p.Ile2763Val
15	48703542	rs1372306620	G	A	p.Ala2754Val
15	48703543	rs1231914510	C	T	p.Ala2754Thr
15	48703546	rs1253681259	G	C	p.Leu2753Val
15	48703554	rs763816801	T	C	p.Asn2750Ser
15	48703554	rs763816801	T	G	p.Asn2750Thr
15	48703560	rs1463355359	T	C	p.Glu2748Gly
15	48703571	rs376119827	C	G	p.Gln2744His
15	48704768	rs750199580	C	T	p.Glu2742Lys
15	48704770	rs1409931715	A	G	p.Ile2741Thr
15	48704773	rs193922242	T	C	p.Asn2740Ser
15	48704774	rs397515860	T	C	p.Asn2740Asp
15	48704776	rs1234746045	G	A	p.Ser2739Phe
15	48704780	rs1313235916	C	A	p.Ala2738Ser
15	48704782	rs751561225	T	C	p.Asp2737Gly
15	48704788	rs1242567582	T	C	p.Glu2735Gly
15	48704789	rs756124960	C	T	p.Glu2735Lys
15	48704791	rs754014086	T	G	p.Asn2734Thr
15	48704792	rs757532651	T	C	p.Asn2734Asp
15	48704794	rs794728340	G	C	p.Thr2733Arg
15	48704803	rs200231626	C	T	p.Arg2730Gln
15	48704807	rs370096856	T	G	p.Lys2729Gln
15	48704809	rs1171667341	C	G	p.Arg2728Thr
15	48704810	rs1355778464	T	C	p.Arg2728Gly
15	48704813	rs758748297	C	T	p.Gly2727Ser
15	48704815	rs552157433	C	T	p.Arg2726Gln
No NMD beyond this nt					
15	48704816	rs61746008	G	A	p.Arg2726Trp
15	48704830	rs1167491040	T	C	p.Asn2721Ser
15	48704843	rs187553035	C	T	p.Glu2717Lys
15	48704851	rs772795413	G	C	p.Ala2714Gly
15	48704851	rs772795413	G	A	p.Ala2714Val
15	48704852	rs766170041	C	A	p.Ala2714Ser
15	48704852	rs766170041	C	G	p.Ala2714Pro
15	48704863	rs1297376845	A	G	p.Leu2710Pro
15	48704869	rs759494825	T	C	p.Asn2708Ser

15	48704885	rs764120982	C	T	p.Gly2703Ser
15	48704891	rs753925682	C	T	p.Val2701Ile
15	48704894	rs757331255	G	A	p.Pro2700Ser
15	48704898	rs376765461	C	G	p.Glu2698Asp
15	48704903	rs1483017438	G	T	p.Pro2697Thr
15	48704908	rs367809284	C	T	p.Gly2695Glu
15	48704911	rs371375126	C	T	p.Arg2694Gln
15	48704912	rs200309328	G	C	p.Arg2694Gly
15	48704921	rs145105768	C	G	p.Gly2691Arg
15	48704921	rs145105768	C	T	p.Gly2691Ser
15	48704923	rs747476726	A	C	p.Met2690Arg
15	48704929	rs1176094152	G	A	p.Ser2688Phe
15	48704932	rs201648983	A	G	p.Val2687Ala
15	48704933	rs1464168530	C	T	p.Val2687Ile
15	48707745	rs748934203	C	T	p.Arg2680His
15	48707757	rs146469379	G	A	p.Pro2676Leu
15	48707758	rs745650955	G	A	p.Pro2676Ser
15	48707785	rs149062442	C	T	p.Glu2667Lys
15	48707790	rs763173031	T	C	p.Asn2665Ser
15	48707799	rs751894266	C	A	p.Gly2662Val
15	48707811	rs1348007486	G	A	p.Pro2658Leu
15	48707814	rs546452543	G	A	p.Ala2657Val
15	48707820	rs202240409	G	A	p.Ala2655Val
15	48707827	rs1286905089	C	T	p.Gly2653Ser
15	48707835	rs756819682	T	C	p.Asn2650Ser
15	48707851	rs1206691178	C	G	p.Gly2645Arg
15	48707865	rs755825345	T	G	p.Glu2640Ala
15	48707880	rs779744112	G	A	p.Ala2635Val
15	48707881	rs746859988	C	T	p.Ala2635Thr
15	48707889	rs776686839	A	C	p.Met2632Arg
15	48707890	rs1411527799	T	C	p.Met2632Val
15	48707893	rs1170632495	ACTTG	A	p.Lys2630AlafsTer51
15	48707926	rs771136046	C	A	p.Ala2620Ser
15	48707926	rs771136046	C	G	p.Ala2620Pro
15	48707928	rs113926846	C	T	p.Gly2619Glu
15	48707932	rs141133182	C	T	p.Gly2618Arg
15	48707936	rs138184493	G	C	p.Ile2616Met
15	48707938	rs143677764	T	C	p.Ile2616Val
15	48707944	rs1280320763	C	T	p.Ala2614Thr
15	48707944	rs1280320763	C	G	p.Ala2614Pro
15	48707950	rs915358842	G	A	p.Leu2612Phe
15	48712887	rs1172183618	C	T	p.Val2606Ile
15	48712901	rs1455161701	T	C	p.Gln2601Arg
15	48712943	rs1331154469	C	T	p.Gly2587Asp

15	48712949	rs727503054	A	G	p.Ile2585Thr
15	48712958	rs762330526	T	A	p.Gln2582Leu
15	48712964	rs749912176	C	T	p.Gly2580Asp
15	48712971	rs765942432	G	T	p.Gln2578Lys
15	48712976	rs369888822	C	T	p.Arg2576His
15	48713001	rs138558987	C	T	p.Val2568Met
15	48713770	rs1397580172	C	T	p.Gly2562Ser
15	48713774	rs780206348	C	A	p.Gln2560His
15	48713778	rs1289740895	T	G	p.Asp2559Ala
15	48713782	rs1344364560	G	C	p.Leu2558Val
15	48713793	rs199522781	C	T	p.Arg2554Gln
15	48713793	rs199522781	C	G	p.Arg2554Pro
15	48713794	rs369294972	G	A	p.Arg2554Trp
15	48713802	rs1479746316	T	G	p.Glu2551Ala
15	48713830	rs794728276	G	T	p.Gln2542Lys
15	48713856	rs111231879	T	C	p.Asn2533Ser
15	48713863	rs773877445	C	G	p.Asp2531His
15	48713878	rs1401203158	T	C	p.Asn2526Asp
15	48714151	rs551086874	A	G	p.Ile2523Thr
15	48714152	rs199524640	T	G	p.Ile2523Leu
15	48714160	rs763759308	G	T	p.Thr2520Lys
15	48714160	rs763759308	G	A	p.Thr2520Met
15	48714169	rs368725343	T	C	p.Gln2517Arg
15	48714190	rs767602851	T	C	p.Lys2510Arg
15	48714196	rs752872632	G	A	p.Thr2508Ile
15	48714203	rs756295016	C	T	p.Gly2506Ser
15	48714209	rs1223532755	T	A	p.Ile2504Phe
15	48714211	rs749654334	G	A	p.Thr2503Ile
15	48714218	rs371110611	C	G	p.Val2501Leu
15	48714228	rs775174057	C	A	p.Gln2497His
15	48714235	rs1252037822	T	C	p.Asn2495Ser
15	48714237	rs776211233	G	T	p.His2494Gln
15	48714241	rs1175211527	T	A	p.Gln2493Leu
15	48714244	rs1415885269	T	C	p.Lys2492Arg
15	48714248	rs761602510	T	C	p.Thr2491Ala
15	48714264	rs377272529	A	C	p.Asp2485Glu
15	48717568	rs374630707	T	C	p.Lys2484Arg
15	48717576		CCTT	C	p.Arg2481del
15	48717580	rs1314994683	C	T	p.Gly2480Glu
15	48717589	rs747777955	T	C	p.Gln2477Arg
15	48717596	rs1297696298	T	A	p.Ile2475Phe
15	48717596	rs1297696298	T	G	p.Ile2475Leu
15	48717607	rs193922233	G	A	p.Pro2471Leu
15	48717607	rs193922233	G	C	p.Pro2471Arg

15	48717618	rs762783068	C	G	p.Gln2467His
15	48717619	rs770839761	T	C	p.Gln2467Arg
15	48717631	rs764099278	T	C	p.Glu2463Gly
15	48717635	rs371278936	T	C	p.Thr2462Ala
15	48717636	rs754047254	G	C	p.Asn2461Lys
15	48717640	rs144189837	T	C	p.Lys2460Arg
15	48717659	rs1166405014	G	T	p.Pro2454Thr
15	48717664	rs1470515381	G	T	p.Pro2452His
15	48717667	rs1414627199	G	A	p.Ala2451Val
15	48717671	rs750796086	G	C	p.Gln2450Glu
15	48717673	rs146166400	T	A	p.Asn2449Ile
15	48717673	rs146166400	T	C	p.Asn2449Ser
15	48717683	rs1325322674	T	C	p.Asn2446Asp
15	48717686	rs1276268459	G	C	p.Leu2445Val
15	48717939	rs763350185	C	G	p.Val2443Leu
15	48717939	rs763350185	C	T	p.Val2443Ile
15	48717950	rs752064894	C	A	p.Gly2439Val
15	48717951	rs1292102366	C	T	p.Gly2439Arg
15	48717957	rs755405993	T	C	p.Ile2437Val
15	48717965	rs781745172	G	C	p.Thr2434Ser
15	48717971	rs1266993955	C	G	p.Gly2432Ala
15	48717975	rs752133637	T	C	p.Thr2431Ala
15	48717983	rs565474071	A	G	p.Ile2428Thr
15	48717984	rs1452251663	T	C	p.Ile2428Val
15	48718005	rs778715805	C	T	p.Asp2421Asn
15	48718025	rs143863014	C	T	p.Arg2414Gln
15	48718035	rs775558051	C	T	p.Asp2411Asn
15	48718038	rs548057493	G	A	p.His2410Tyr
15	48718038	rs548057493	G	C	p.His2410Asp
15	48718040	rs1360302669	A	G	p.Ile2409Thr
15	48718047	rs774554301	T	C	p.Lys2407Glu
15	48718056	rs530059069	C	T	p.Asp2404Asn
15	48719767	rs771260695	C	A	p.Ala2401Ser
15	48719772	rs1428791574	T	C	p.Asn2399Ser
15	48719775	rs1169351376	G	C	p.Thr2398Ser
15	48719779	rs774698871	T	C	p.Met2397Val
15	48719782	rs530362771	A	G	p.Phe2396Leu
15	48719785	rs1448650040	C	T	p.Gly2395Arg
15	48719787	rs199750146	C	T	p.Arg2394Gln
15	48719793	rs767941347	T	C	p.His2392Arg
15	48719797	rs371959082	G	A	p.Pro2391Ser
15	48719815	rs869025423	C	G	p.Ala2385Pro
15	48719818	rs761205556	C	T	p.Val2384Met
15	48719826	rs764629788	T	C	p.Gln2381Arg

15	48719838	rs753324758	A	G	p.Ile2377Thr
15	48719839	rs955085872	T	C	p.Ile2377Val
15	48719869	rs368978109	C	T	p.Gly2367Arg
15	48719872	rs1259235311	C	T	p.Asp2366Asn
15	48719884		C	G	p.Glu2362Gln
15	48719886	rs397515844	G	A	p.Ser2361Leu
15	48719890	rs1176963033	T	G	p.Lys2360Gln
15	48719896	rs140537304	C	T	p.Val2358Ile
15	48719898	rs373227156	G	C	p.Pro2357Arg
15	48719904	rs376372763	C	T	p.Arg2355Lys
15	48719913	rs778947479	G	A	p.Ser2352Phe
15	48719917	rs746127796	C	G	p.Gly2351Arg
15	48719917	rs746127796	C	T	p.Gly2351Ser
15	48719918	rs772287755	G	C	p.Ile2350Met
15	48719920	rs794728263	T	C	p.Ile2350Val
15	48719929	rs1284375434	T	C	p.Met2347Val
15	48719941	rs761076868	C	A	p.Val2343Leu
15	48719947		T	C	p.Thr2341Ala
15	48719948	rs769138948	G	C	p.Phe2340Leu
15	48719968	rs1214531793	T	A	p.Asn2334Tyr
15	48720546	rs747247971	G	A	p.Leu2332Phe
15	48720550	rs763274406	CT	C	p.Glu2330GlyfsTer68
15	48720551	rs1364766064	T	C	p.Glu2330Gly
15	48720552	rs1042807324	CGTCCT	C	p.Gln2328ArgfsTer4
15	48720553	rs363831	G	C	p.Asp2329Glu
15	48720558	rs371097218	G	A	p.Gln2328Ter
15	48720570	rs148831709	C	T	p.Ala2324Thr
15	48720572	rs1242918540	G	A	p.Thr2323Ile
15	48720576	rs748762575	A	G	p.Phe2322Leu
15	48720582	rs1169048403	C	A	p.Asp2320Tyr
15	48720608	rs141868829	C	T	p.Arg2311His
15	48720623	rs770443276	C	T	p.Arg2306His
15	48720639	rs1428185990	T	A	p.Ile2301Phe
15	48720639	rs1428185990	T	G	p.Ile2301Leu
15	48720650	rs773785908	G	A	p.Thr2297Met
15	48720650	rs773785908	G	C	p.Thr2297Arg
15	48720652	rs363830	C	A	p.Gln2296His
15	48720662	rs766471411	T	C	p.Asn2293Ser
15	48722880	rs551736585	C	G	p.Glu2287Gln
15	48722886	rs1294220249	C	A	p.Asp2285Tyr
15	48722891	rs776585918	C	T	p.Arg2283Lys
15	48722894	rs759696323	C	T	p.Arg2282Gln
15	48722895	rs765205164	G	A	p.Arg2282Trp
15	48722897	rs1183209832	T	G	p.Gln2281Pro

15	48722904	rs759674700	C	T	p.Gly2279Arg
15	48722907	rs363835	G	C	p.Pro2278Ala
15	48722907	rs363835	G	A	p.Pro2278Ser
15	48722920	rs778027769	C	T	p.Met2273Ile
15	48722921	rs754270535	A	G	p.Met2273Thr
15	48722922	rs1186249894	T	C	p.Met2273Val
15	48722925	rs1398405075	A	G	p.Tyr2272His
15	48722927	rs1391708183	G	A	p.Thr2271Ile
15	48722950	rs779622071	C	T	p.Met2263Ile
15	48722956	rs771716423	T	G	p.Lys2261Asn
15	48722961	rs779702738	C	T	p.Glu2260Lys
15	48722982	rs1245476075	C	T	p.Glu2253Lys
15	48722994	rs746666535	C	T	p.Asp2249Asn
15	48725070	rs780960909	C	T	p.Met2244Ile
15	48725073	rs747867422	C	A	p.Arg2243Ser
15	48725074	rs769589759	C	T	p.Arg2243Lys
15	48725077	rs773084230	C	T	p.Arg2242His
15	48725078	rs779749926	G	A	p.Arg2242Cys
15	48725081	rs775411623	C	G	p.Asp2241His
15	48725092	rs1382970208	A	T	p.Val2237Glu
15	48725093	rs764218640	C	T	p.Val2237Met
15	48725102	rs112084407	C	T	p.Val2234Met
15	48725111	rs1207479679	T	G	p.Lys2231Gln
15	48725116	rs758803290	T	C	p.Glu2229Gly
15	48725128	rs1481304965	T	C	p.Tyr2225Cys
15	48725132	rs751025814	T	C	p.Thr2224Ala
15	48725143	rs780651466	C	T	p.Arg2220Gln
15	48725150	rs1347008355	C	T	p.Ala2218Thr
15	48725159	rs921997271	G	T	p.Leu2215Met
15	48725161	rs1358783146	G	C	p.Pro2214Arg
15	48725171	rs1407213479	C	A	p.Ala2211Ser
15	48725179	rs146063839	T	C	p.Asn2208Ser
15	48726804	rs1298438310	C	T	p.Met2201Ile
15	48726806	rs776823384	T	C	p.Met2201Val
15	48726806	rs776823384	T	A	p.Met2201Leu
15	48726812	rs770132403	C	T	p.Gly2199Ser
15	48726814	rs1288652175	G	T	p.Pro2198His
15	48726817	rs763165301	T	C	p.Glu2197Gly
15	48726830	rs201361628	C	T	p.Glu2193Lys
15	48726848	rs760055383	C	T	p.Gly2187Ser
15	48726850	rs193922225	C	T	p.Gly2186Glu
15	48726873	rs770257902	A	T	p.Asn2178Lys
15	48726895	rs1413266501	G	A	p.Ser2171Phe
15	48729161	rs200469438	C	A	p.Val2165Leu

15	48729169	rs780079004	T	C	p.Asn2162Ser
15	48729181	rs751560904	A	C	p.Ile2158Ser
15	48729182	rs1285115710	T	C	p.Ile2158Val
15	48729193	rs756219617	G	C	p.Pro2154Arg
15	48729193	rs756219617	G	A	p.Pro2154Leu
15	48729200	rs777877864	C	T	p.Glu2152Lys
15	48729205	rs794728250	C	T	p.Arg2150His
15	48729206	rs76702162	G	A	p.Arg2150Cys
15	48729208	rs113080385	T	A	p.Tyr2149Phe
15	48729227	rs779072283	T	A	p.Ile2143Phe
15	48729238	rs794728248	T	C	p.His2139Arg
15	48729239	rs1399470743	G	A	p.His2139Tyr
15	48729253		G	A	p.Pro2134Leu
15	48729272	rs1346130260	T	C	p.Met2128Val
15	48729539	rs1310047239	C	T	p.Gly2120Glu
15	48729543	rs876660976	C	G	p.Val2119Leu
15	48729549	rs572754741	T	C	p.Ile2117Val
15	48729560	rs363816	T	A	p.Tyr2113Phe
15	48729570	rs1004358663	T	C	p.Ile2110Val
15	48729575	rs762659907	C	T	p.Arg2108His
15	48729575	rs762659907	C	A	p.Arg2108Leu
15	48729576	rs1246984265	G	T	p.Arg2108Ser
15	48729581	rs1437239300	G	A	p.Ala2106Val
15	48729584	rs1165109120	T	A	p.Glu2105Val
15	48729976	rs200816828	G	A	p.Thr2101Met
15	48730010	rs1304643689	C	G	p.Glu2090Gln
15	48730079	rs1342803259	C	T	p.Gly2067Arg
15	48730082	rs1219570062	C	T	p.Glu2066Lys
15	48730090		G	A	p.Ala2063Val
15	48730091	rs1316593215	C	T	p.Ala2063Thr
15	48730108	rs181032147	C	T	p.Arg2057Gln
15	48733926	rs1452793240	C	T	p.Arg2052Lys
15	48733934	rs553959381	A	C	p.Ser2049Arg
15	48733971	rs556131403	T	C	p.Lys2037Arg
15	48733971	rs556131403	T	G	p.Lys2037Thr
15	48733986	rs756506237	G	C	p.Thr2032Ser
15	48733987	rs764638219	T	A	p.Thr2032Ser
15	48733992	rs754418726	C	G	p.Ser2030Thr
15	48734008	rs113577372	C	A	p.Ala2025Ser
15	48734019	rs1246124504	G	A	p.Pro2021Leu
15	48734026	rs377149130	C	T	p.Glu2019Lys
15	48734029	rs363802	C	T	p.Val2018Ile
15	48734038	rs768457461	C	T	p.Asp2015Asn
15	48734040	rs776507208	A	G	p.Ile2014Thr

15	48736750	rs773204216	C	T	p.Glu2009Lys
15	48736758	rs772214666	A	G	p.Leu2006Pro
15	48736774	rs921321822	G	A	p.Pro2001Ser
15	48736798	rs377671719	C	T	p.Asp1993Asn
15	48736812	rs142912485	G	A	p.Thr1988Ile
15	48736821	rs765599101	G	A	p.Ala1985Val
15	48736837	rs370940450	C	G	p.Glu1980Gln
15	48736839	rs1333100611	A	G	p.Leu1979Pro
15	48736854	rs765878996	A	G	p.Ile1974Thr
15	48737587	rs1380256347	C	T	p.Gly1968Glu
15	48737591	rs776999627	C	A	p.Asp1967Tyr
15	48737603	rs756983687	CAT	C	p.Tyr1962Ter
15	48737614	rs773486280	T	C	p.Asn1959Ser
15	48737648	rs766850261	T	C	p.Ile1948Val
15	48737653	rs1178878403	T	C	p.Gln1946Arg
15	48737674	rs752367915	C	T	p.Gly1939Glu
15	48738905	rs750411851	A	G	p.Ile1929Thr
15	48738906	rs755073529	T	C	p.Ile1929Val
15	48738912	rs886038964	CATT	C	p.Asn1926del
15	48738917	rs781395141	T	C	p.Asn1925Ser
15	48738920	rs748230405	T	C	p.His1924Arg
15	48738921	rs1201849394	G	T	p.His1924Asn
15	48738938	rs993464239	T	C	p.His1918Arg
15	48738953	rs749606552	T	C	p.Asn1913Ser
15	48738966	rs886038785	T	A	p.Ile1909Phe
15	48738966	rs886038785	T	C	p.Ile1909Val
15	48738968	rs1304811982	G	A	p.Thr1908Ile
15	48738974	rs774798866	C	T	p.Arg1906Gln
15	48738975	rs746343138	G	A	p.Arg1906Trp
15	48738980	rs1269096957	G	A	p.Thr1904Ile
15	48738981	rs1342978864	T	C	p.Thr1904Ala
15	48738986	rs1401182876	T	C	p.Asn1902Ser
15	48738998	rs774968480	T	C	p.Asp1898Gly
15	48739015		T	C	p.Ile1892Met
15	48739017	rs760170973	T	C	p.Ile1892Val
15	48740966	rs779227350	C	G	p.Leu1890Phe
15	48740974	rs746289998	T	A	p.Met1888Leu
15	48740980	rs1038114901	G	C	p.Gln1886Glu
15	48740988	rs772564143	T	C	p.Asn1883Ser
15	48740992	rs775867192	T	C	p.Thr1882Ala
15	48741006	rs746473206	T	C	p.His1877Arg
15	48741023	rs776310363	G	T	p.Ser1871Arg
15	48741024	rs761345435	C	T	p.Ser1871Asn
15	48741033	rs145082616	G	A	p.Thr1868Ile

15	48741033	rs145082616	G	C	p.Thr1868Arg
15	48741039	rs773133679	A	G	p.Ile1866Thr
15	48741040	rs367586350	T	C	p.Ile1866Val
15	48741051	rs976161721	T	C	p.His1862Arg
15	48741054	rs766358553	C	T	p.Ser1861Asn
15	48741063	rs751472490	T	C	p.Asn1858Ser
15	48741069	rs764048331	A	T	p.Ile1856Asn
15	48741087	rs779174265	C	T	p.Arg1850His
15	48741088	rs750720912	G	A	p.Arg1850Cys
15	48741090	rs1323245073	T	C	p.Asp1849Gly
15	48744771	rs753858988	C	G	p.Gly1845Arg
15	48744773	rs761886457	G	C	p.Thr1844Arg
15	48744786	rs765387131	G	A	p.Arg1840Cys
15	48744788	rs758725993	T	A	p.Tyr1839Phe
15	48744794	rs752008146	G	C	p.Pro1837Arg
15	48744795	rs755430984	G	A	p.Pro1837Ser
15	48744809	rs764203302	C	T	p.Arg1832His
15	48744821	rs747650508	G	T	p.Ala1828Glu
15	48744825	rs769479864	T	C	p.Thr1827Ala
15	48744837	rs567397762	C	T	p.Glu1823Lys
15	48744840	rs777539060	C	A	p.Ala1822Ser
15	48744840	rs777539060	C	T	p.Ala1822Thr
15	48744845	rs1340155407	C	T	p.Arg1820His
15	48744855	rs757901214	C	T	p.Val1817Met
15	48744861	rs745680336	C	T	p.Gly1815Ser
15	48744863	rs775463311	T	C	p.Asn1814Ser
15	48744864	rs1257299340	T	C	p.Asn1814Asp
15	48748843	rs745636786	C	T	p.Val1805Ile
15	48748855	rs371112266	C	T	p.Asp1801Asn
15	48748876	rs773214940	G	A	p.Pro1794Ser
15	48748893	rs1303042338	C	G	p.Ser1788Thr
15	48748936	rs774686727	G	T	p.Pro1774Thr
15	48748944	rs759791896	C	T	p.Arg1771Gln
15	48748945	rs767884599	G	A	p.Arg1771Trp
15	48752461	rs761188772	A	C	p.Tyr1760Asp
15	48752467	rs1414735771	C	T	p.Asp1758Asn
15	48752500	rs1250470667	G	A	p.Leu1747Phe
15	48755281	rs1195739495	G	A	p.Thr1741Ile
15	48755302	rs749878633	T	A	p.Glu1734Val
15	48755314	rs751256880	T	G	p.Asn1730Thr
15	48755323	rs780993677	C	T	p.Arg1727Gln
15	48755324	rs752450678	G	A	p.Arg1727Trp
15	48755350	rs999375969	A	G	p.Met1718Thr
15	48755354	rs777640133	T	G	p.Lys1717Gln

15	48755361	rs368287795	C	T	p.Met1714Ile
15	48755380	rs758600004	C	T	p.Gly1708Glu
15	48755417	rs373320952	A	G	p.Tyr1696His
15	48755434	rs199644881	A	C	p.Met1690Arg
15	48756098	rs771444877	A	G	p.Met1688Thr
15	48756126	rs759114752	T	G	p.Met1679Leu
15	48756134	rs1275434677	G	A	p.Pro1676Leu
15	48756153	rs1204042568	A	G	p.Tyr1670His
15	48756162	rs140626	C	G	p.Val1667Leu
15	48756162	rs140626	C	T	p.Val1667Ile
15	48756177	rs1471557498	T	A	p.Thr1662Ser
15	48756198	rs146223538	G	A	p.Pro1655Ser
15	48756203	rs781450756	T	G	p.Glu1653Ala
15	48756212	rs1377064449	T	C	p.Asn1650Ser
15	48757776	rs768366890	C	T	p.Arg1644Gln
15	48757779	rs761765010	G	T	p.Thr1643Lys
15	48757794	rs374520085	T	C	p.Tyr1638Cys
15	48757794	rs374520085	T	G	p.Tyr1638Ser
15	48757801	rs767451077	C	T	p.Gly1636Ser
15	48757806	rs1373441031	G	A	p.Pro1634Leu
15	48757807		G	A	p.Pro1634Ser
15	48757812	rs756227025	C	T	p.Arg1632His
15	48757813	rs544990350	G	A	p.Arg1632Cys
15	48757840	rs757667957	T	C	p.Ile1623Val
15	48757875	rs746320943	T	C	p.Gln1611Arg
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15	48757994	rs754580003	T	C	p.Ile1603Met
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15	48758016	rs769588424	C	T	p.Arg1596Gln
15	48758031	rs772818208	C	T	p.Gly1591Glu
15	48758053	rs148888513	C	T	p.Glu1584Lys
15	48760144	rs794728230	C	T	p.Val1580Met
15	48760146	rs772009116	G	A	p.Ala1579Val
15	48760155	rs776625874	A	G	p.Met1576Thr
15	48760164	rs1286993730	G	A	p.Pro1573Leu
15	48760216	rs766722922	C	T	p.Gly1556Ser
15	48760219	rs760055928	C	T	p.Val1555Ile
15	48760230	rs1311329975	T	C	p.Asn1551Ser
15	48760232	rs933962712	G	C	p.Ser1550Arg
15	48760242	rs183306990	G	A	p.Thr1547Ile
15	48760251	rs755735706	T	C	p.Asn1544Ser
15	48760252	rs777260622	T	G	p.Asn1544His
15	48760260	rs753491504	C	T	p.Arg1541Gln
15	48760266	rs756882751	C	T	p.Arg1539Gln

15	48760273	rs757316301	C	T	p.Asp1537Asn
15	48760284	rs1254024310	T	C	p.Asn1533Ser
15	48760290	rs1313110067	G	C	p.Ser1531Cys
15	48760293	rs778710767	C	T	p.Arg1530His
15	48760623	rs201546777	C	T	p.Arg1523Gln
15	48760624	rs397515812	G	C	p.Arg1523Gly
15	48760624	rs397515812	G	A	p.Arg1523Ter
15	48760647	rs774767316	G	C	p.Pro1515Arg
15	48760650	rs746205136	G	A	p.Pro1514Leu
15	48760661	rs772526144	G	C	p.Ile1510Met
15	48760699	rs761187818	T	C	p.Ile1498Val
15	48760707	rs1387810687	G	A	p.Thr1495Ile
15	48760708	rs1181916481	T	G	p.Thr1495Pro
15	48762846	rs762532435	C	G	p.Gly1482Arg
15	48762846	rs762532435	C	T	p.Gly1482Ser
15	48762849	rs61730054	T	C	p.Ser1481Gly
15	48762853	rs370161725	G	C	p.Asp1479Glu
15	48762869	rs375670968	A	G	p.Ile1474Thr
15	48762870	rs752538366	T	G	p.Ile1474Leu
15	48762879	rs779079538	C	T	p.Glu1471Lys
15	48762884	rs397515808	C	T	p.Arg1469His
15	48762885	rs587782946	G	A	p.Arg1469Cys
15	48762900	rs1161494614	G	C	p.Leu1464Val
15	48762900	rs1161494614	G	A	p.Leu1464Phe
15	48762926	rs397515807	A	C	p.Ile1455Ser
15	48762932	rs368650399	G	C	p.Pro1453Arg
15	48762932	rs368650399	G	A	p.Pro1453Leu
15	48762933	rs772639818	G	C	p.Pro1453Ala
15	48762948	rs371377334	C	T	p.Asp1448Asn
15	48764756	rs560230585	G	A	p.Ala1443Val
15	48764757	rs1370217982	C	T	p.Ala1443Thr
15	48764763	rs372118067	C	T	p.Gly1441Arg
15	48764768	rs755085498	G	C	p.Ala1439Gly
15	48764771	rs587782945	C	T	p.Ser1438Asn
15	48764772	rs1309215883	T	C	p.Ser1438Gly
15	48764775	rs1408492045	G	C	p.Pro1437Ala
15	48764778	rs377338217	C	A	p.Val1436Leu
15	48764778	rs377338217	C	T	p.Val1436Met
15	48764790	rs778145681	C	T	p.Asp1432Asn
15	48764801	rs778219976	C	T	p.Arg1428His
15	48764807	rs531751210	C	G	p.Gly1426Ala
15	48764814	rs201273753	G	C	p.Pro1424Ala
15	48764823	rs1389901447	G	A	p.Leu1421Phe
15	48764834	rs768531262	T	C	p.Asn1417Ser

15	48764844	rs376840416	G	A	p.Leu1414Phe
15	48764849	rs1394943800	A	G	p.Leu1412Pro
15	48764853	rs1366885432	T	G	p.Asn1411His
15	48764863	rs774287739	C	G	p.Glu1407Asp
15	48764870	rs767606368	A	C	p.Leu1405Arg
15	48766454	rs1158045779	G	T	p.Thr1403Lys
15	48766454	rs1158045779	G	A	p.Thr1403Ile
15	48766464	rs1459080171	A	G	p.Phe1400Leu
15	48766466	rs1389668311	C	G	p.Gly1399Ala
15	48766472	rs747867726	C	A	p.Gly1397Val
15	48766472	rs747867726	C	G	p.Gly1397Ala
15	48766499	rs749196340	C	T	p.Arg1388His
15	48766500	rs770860280	G	A	p.Arg1388Cys
15	48766505	rs794728219	G	C	p.Ser1386Cys
15	48766510	rs1488326228	C	T	p.Met1384Ile
15	48766512	rs775543440	T	C	p.Met1384Val
15	48766525	rs760803105	G	C	p.Asp1379Glu
15	48766534	rs1180794278	C	A	p.Gln1376His
15	48766538	rs1409079752	C	T	p.Ser1375Asn
15	48766545	rs768846398	T	C	p.Met1373Val
15	48766548	rs1367740488	G	A	p.His1372Tyr
15	48766553	rs761971121	C	T	p.Gly1370Glu
15	48766555	rs765588220	A	T	p.Asn1369Lys
15	48766556	rs370923981	T	C	p.Asn1369Ser
15	48766734	rs1300276343	T	C	p.Lys1360Glu
15	48766737	rs202192505	T	C	p.Ile1359Val
15	48766748	rs773621768	A	G	p.Ile1355Thr
15	48766755	rs187177496	C	T	p.Gly1353Arg
15	48766757	rs1459728237	G	T	p.Pro1352His
15	48766758	rs760143789	G	A	p.Pro1352Ser
15	48766760	rs1296505029	C	T	p.Ser1351Asn
15	48766766	rs1373690375	C	G	p.Ser1349Thr
15	48766778	rs767079851	C	T	p.Ser1345Asn
15	48766794	rs755791852	T	C	p.Thr1340Ala
15	48766800	rs1416288007	C	T	p.Val1338Ile
15	48766803	rs753648789	C	T	p.Ala1337Thr
15	48766805	rs886038781	T	C	p.His1336Arg
15	48766811	rs191989961	C	T	p.Gly1334Asp
15	48766824	rs1272869223	C	T	p.Ala1330Thr
15	48766841	rs778709645	T	C	p.Asn1324Ser
15	48766842	rs745753080	T	C	p.Asn1324Asp
15	48773854	rs750219182	G	A	p.Thr1321Ile
15	48773879	rs1156984408	C	T	p.Gly1313Ser
15	48773893	rs746254931	T	G	p.Asp1308Ala

15	48773906	rs1364225801	T	A	p.Ile1304Phe
15	48773920	rs774851476	G	A	p.Thr1299Met
15	48773926	rs200342067	T	C	p.Glu1297Gly
15	48773938	rs775904104	C	T	p.Ser1293Asn
15	48773939	rs761277748	T	G	p.Ser1293Arg
15	48773949	rs532439946	A	C	p.Asn1289Lys
15	48773962	rs776128021	T	C	p.Asp1285Gly
15	48773971	rs140647	T	C	p.Asn1282Ser
15	48776023	rs1372986456	G	C	p.Thr1277Ser
15	48776030	rs747414686	T	G	p.Met1275Leu
15	48776045	rs1173856099	T	G	p.Met1270Leu
15	48776056	rs200283837	T	A	p.Tyr1266Phe
15	48776068	rs371103773	C	T	p.Arg1262Lys
15	48776083	rs1294825256	A	T	p.Ile1257Asn
15	48776087	rs772890884	T	C	p.Asn1256Asp
15	48776111	rs1235270450	T	C	p.Ile1248Val
15	48776113	rs568625812	T	A	p.Asn1247Ile
15	48776116	rs1203351899	G	C	p.Pro1246Arg
15	48776117	rs766032746	G	A	p.Pro1246Ser
15	48776123	rs1261465806	C	T	p.Asp1244Asn
15	48776135	rs573187346	C	T	p.Asp1240Asn
15	48776138	rs767621527	T	C	p.Ile1239Val
15	48777574	rs1459223225	T	C	p.Thr1237Ala
15	48777594	rs774003646	A	G	p.Met1230Thr
15	48777595	rs759424465	T	G	p.Met1230Leu
15	48777609	rs775532488	G	A	p.Pro1225Leu
15	48777631	rs765353743	T	C	p.Ser1218Gly
15	48777650	rs1292894070	G	T	p.Phe1211Leu
15	48777673	rs775707895	T	C	p.Met1204Val
15	48777678	rs758542279	C	T	p.Ser1202Asn
15	48777678	rs758542279	C	A	p.Ser1202Ile
15	48777679	rs751847164	T	C	p.Ser1202Gly
15	48777687	rs794728206	TC	T	p.Asp1199MetfsTer5
15	48777690	rs755375255	A	G	p.Ile1198Thr
15	48777691	rs370572503	T	C	p.Ile1198Val
15	48779275	rs1352765609	C	T	p.Val1196Ile
15	48779286	rs751764864	C	T	p.Arg1192Lys
15	48779288	rs150912619	A	T	p.Asp1191Glu
15	48779290	rs370121450	C	T	p.Asp1191Asn
15	48779296	rs756601599	T	C	p.Thr1189Ala
15	48779301	rs193922200	T	C	p.His1187Arg
15	48779319	rs748716804	G	A	p.Ala1181Val
15	48779330		C	G	p.Lys1177Asn
15	48779338	rs756754760	T	C	p.Ile1175Val

15	48779347	rs200125037	C	T	p.Val1172Met
15	48779352	rs137854475	C	T	p.Arg1170His
15	48779358	rs776667707	T	C	p.Asn1168Ser
15	48779374	rs1481457003	C	T	p.Ala1163Thr
15	48779509	rs794728204	C	T	p.Asp1155Asn
15	48779517	rs539103389	G	A	p.Ala1152Val
15	48779518	rs140890215	C	T	p.Ala1152Thr
15	48779520	rs145146283	G	A	p.Ser1151Phe
15	48779526	rs147584221	T	C	p.Asn1149Ser
15	48779530	rs140598	G	C	p.Pro1148Ala
15	48779533	rs749929136	A	T	p.Ser1147Thr
15	48779535	rs758018009	A	G	p.Leu1146Pro
15	48779544	rs794728306	C	T	p.Gly1143Asp
15	48779550	rs2228241	G	A	p.Pro1141Leu
15	48779557	rs780972853	C	G	p.Glu1139Gln
15	48779562	rs137854456	C	A	p.Arg1137Leu
15	48779562	rs137854456	C	T	p.Arg1137His
15	48779563	rs1439487763	G	A	p.Arg1137Cys
15	48779563	rs1439487763	G	C	p.Arg1137Gly
15	48779567	rs777727844	A	T	p.Ser1135Arg
15	48779569	rs749255004	T	C	p.Ser1135Gly
15	48779577	rs772094802	G	A	p.Thr1132Ile
15	48779583	rs747189975	T	C	p.His1130Arg
15	48779596	rs1437464599	C	T	p.Gly1126Ser
15	48779598	rs768831064	C	T	p.Arg1125Gln
15	48779611	rs1445613212	G	A	p.Pro1121Ser
15	48779613	rs1183556572	T	A	p.Asp1120Val
15	48779616		C	T	p.Arg1119Lys
15	48779627	rs1383901118	A	C	p.Asp1115Glu
15	48779632	rs1006702602	T	C	p.Ile1114Val
15	48780313	rs140975645	T	C	p.Met1112Val
15	48780313	rs140975645	T	A	p.Met1112Leu
15	48780321	rs776753439	T	C	p.Lys1109Arg
15	48780325	rs374604609	T	A	p.Met1108Leu
15	48780331	rs76288337	T	C	p.Met1106Val
15	48780332	rs770232184	G	C	p.Phe1105Leu
15	48780340	rs773723253	T	C	p.Ser1103Gly
15	48780352	rs763485521	C	T	p.Glu1099Lys
15	48780393	rs1031572615	T	C	p.Gln1085Arg
15	48780418	rs140586	A	T	p.Ser1077Thr
15	48780421	rs201156527	T	C	p.Ile1076Val
15	48780421	rs201156527	T	G	p.Ile1076Leu
15	48780423	rs369745372	C	A	p.Arg1075Leu
15	48780423	rs369745372	C	T	p.Arg1075His

15	48780424	rs186805359	G	A	p.Arg1075Cys
15	48780433	rs778867355	C	T	p.Asp1072Asn
15	48780436	rs990134651	T	C	p.Ile1071Val
15	48780567	rs753611690	G	A	p.Thr1069Ile
15	48780568	rs761632843	T	C	p.Thr1069Ala
15	48780576	rs376659156	C	G	p.Arg1066Thr
15	48780589	rs758366498	C	T	p.Asp1062Asn
15	48780592	rs781064769	G	C	p.Leu1061Val
15	48780601	rs886039208	C	G	p.Gly1058Arg
15	48780604	rs1446197737	T	G	p.Ser1057Arg
15	48780628	rs778181932	C	T	p.Gly1049Ser
15	48780628	rs778181932	CA	C	p.Ile1048MetfsTer40
15	48780631	rs2229324	T	C	p.Ile1048Val
15	48780640	rs1442659895	T	C	p.Arg1045Gly
15	48780645	rs137854472	T	C	p.Lys1043Arg
15	48780650	rs576395584	G	T	p.His1041Gln
15	48780661	rs1297814403	G	A	p.Leu1038Phe
15	48780671	rs1454893360	C	T	p.Met1034Ile
15	48780673	rs559868182	T	C	p.Met1034Val
15	48780684	rs375996640	T	C	p.Asn1030Ser
15	48782053	rs200381100	A	G	p.Phe1026Ser
15	48782069	rs1242604605	T	C	p.Asn1021Asp
15	48782072	rs111801777	T	C	p.Thr1020Ala
15	48782087	rs55831697	C	T	p.Ala1015Thr
15	48782095	rs113990281	G	T	p.Pro1012His
15	48782099	rs1267721327	C	T	p.Gly1011Arg
15	48782104	rs148076256	G	C	p.Pro1009Arg
15	48782112	rs543230093	C	A	p.Glu1006Asp
15	48782114	rs754040534	C	T	p.Glu1006Lys
15	48782116	rs757410686	T	A	p.Glu1005Val
15	48782117	rs564713154	C	T	p.Glu1005Lys
15	48782135	rs765549411	T	C	p.Arg999Gly
15	48782138	rs750727783	T	A	p.Met998Leu
15	48782140	rs1284644357	G	C	p.Pro997Arg
15	48782150	rs780301913	C	T	p.Glu994Lys
15	48782173	rs1490859586	G	A	p.Ala986Val
15	48782174	rs112287730	C	T	p.Ala986Thr
15	48782180	rs747713929	C	A	p.Val984Phe
15	48782180	rs747713929	C	T	p.Val984Ile
15	48782195	rs748915171	C	T	p.Ala979Thr
15	48782196	rs138438849	G	C	p.Asp978Glu
15	48782199	rs759544189	C	T	p.Met977Ile
15	48782200	rs199682686	A	C	p.Met977Arg
15	48782201	rs776833421	T	C	p.Met977Val

15	48782203	rs140954477	C	T	p.Arg976His
15	48782204	rs548296552	G	A	p.Arg976Cys
15	48782209	rs763094223	C	T	p.Arg974His
15	48782215	rs1372325922	G	A	p.Ala972Val
15	48782219	rs766660415	T	C	p.Ile971Val
15	48782221	rs751985082	G	A	p.Pro970Leu
15	48782222	rs755462838	G	A	p.Pro970Ser
15	48782227	rs781698952	G	C	p.Thr968Ser
15	48782228	rs752117227	T	A	p.Thr968Ser
15	48782236	rs1233890748	T	G	p.Glu965Ala
15	48782237	rs748905831	C	G	p.Glu965Gln
15	48782237	rs748905831	C	T	p.Glu965Lys
15	48782243	rs745709588	C	G	p.Glu963Gln
15	48782246	rs1179986943	A	G	p.Tyr962His
15	48782247	rs142964120	C	A	p.Arg961Ser
15	48782253	rs1411365281	G	T	p.Phe959Leu
15	48782269	rs112911555	C	T	p.Arg954His
15	48784661	rs147178336	G	A	p.Leu951Phe
15	48784679	rs1216969896	C	A	p.Ala945Ser
15	48784689	rs774516394	C	A	p.Met941Ile
15	48784693	rs759776685	C	A	p.Gly940Val
15	48784696	rs1202753732	C	T	p.Ser939Asn
15	48784720	rs200078617	C	G	p.Gly931Ala
15	48784721	rs761232763	C	T	p.Gly931Arg
15	48784726	rs764560018	G	A	p.Thr929Ile
15	48784727	rs372203315	T	C	p.Thr929Ala
15	48784727	rs372203315	T	A	p.Thr929Ser
15	48784739	rs149681175	G	C	p.Leu925Val
15	48784741	rs1206476337	C	A	p.Gly924Val
15	48784759	rs557798071	G	C	p.Pro918Arg
15	48784763	rs1298901384	A	G	p.Phe917Leu
15	48784766	rs373644734	C	G	p.Val916Leu
15	48784766	rs373644734	C	T	p.Val916Met
15	48784777	rs754919275	T	A	p.Asp912Val
15	48784777	rs754919275	T	C	p.Asp912Gly
15	48784780	rs748115094	A	G	p.Ile911Thr
15	48784781	rs200885368	T	C	p.Ile911Val
15	48784782	rs774419072	A	C	p.Asp910Glu
15	48786408	rs781062880	T	A	p.Gln907His
15	48786416	rs756111066	C	T	p.Gly905Arg
15	48786418	rs778951277	T	C	p.Lys904Arg
15	48786419	rs745999026	T	C	p.Lys904Glu
15	48786425	rs1419423251	T	C	p.Arg902Gly
15	48786427	rs1177995453	G	A	p.Ser901Leu

15	48786446	rs772308703	T	C	p.Ile895Val
15	48786451	rs775538043	T	C	p.Asp893Gly
15	48787323	rs758357747	C	T	p.Val892Ile
15	48787331	rs1393818056	A	T	p.Leu889Gln
15	48787332	rs1297045802	G	C	p.Leu889Val
15	48787335	rs1462845316	T	A	p.Thr888Ser
15	48787356	rs781682561	C	T	p.Ala881Thr
15	48787368	rs1475934502	A	C	p.Ser877Ala
15	48787384	rs770290542	T	G	p.Leu871Phe
15	48787391	rs566293486	G	T	p.Ala869Asp
15	48787397	rs145464311	T	C	p.Asn867Ser
15	48787401	rs794728329	T	C	p.Ile866Val
15	48787407	rs763895619	T	C	p.Ile864Val
15	48787415	rs794728328	C	T	p.Arg861Gln
15	48787418	rs757219243	C	T	p.Gly860Glu
15	48787424	rs1277566806	A	G	p.Ile858Thr
15	48787450	rs778258207	G	C	p.Ile849Met
15	48787674	rs751564716	A	G	p.Ile844Thr
15	48787684	rs1381506466	T	A	p.Thr841Ser
15	48787690	rs1319430305	C	T	p.Asp839Asn
15	48787691	rs1439547805	C	G	p.Leu838Phe
15	48787697	rs193922190	A	T	p.Ser836Arg
15	48787701	rs755047716	T	C	p.Glu835Gly
15	48787714	rs1444143450	C	T	p.Glu831Lys
15	48787719	rs868667291	A	G	p.Ile829Thr
15	48787732	rs1326854455	G	A	p.Pro825Ser
15	48787754	rs1307248706	A	C	p.Ile817Met
15	48787771	rs201778577	C	T	p.Glu812Lys
15	48787783	rs1200915579	T	C	p.Ile808Val
15	48788305	rs1220678313	G	A	p.Thr804Ile
15	48788323	rs1064793112	T	C	p.Tyr798Cys
15	48788326	rs983469033	A	C	p.Ile797Ser
15	48788339	rs767639889	G	A	p.Pro793Ser
15	48788372	rs752891726	T	C	p.Arg782Gly
15	48788377	rs886039058	T	A	p.Gln780Leu
15	48788398	rs1193928660	C	A	p.Ser773Ile
15	48788400	rs756381478	G	C	p.Asn772Lys
15	48789465	rs771050088	A	G	p.Val764Ala
15	48789466	rs769641351	C	T	p.Val764Ile
15	48789466	rs769641351	C	G	p.Val764Leu
15	48789489	rs764101656	A	G	p.Val756Ala
15	48789517	rs1284612897	T	C	p.Lys747Glu
15	48789528	rs761942436	C	T	p.Arg743His
15	48789532	rs1267840202	G	C	p.Leu742Val

15	48789548	rs1450795956	A	C	p.Asn736Lys
15	48789550	rs878853678	T	C	p.Asn736Asp
15	48789559	rs535275692	T	C	p.Ile733Val
15	48789568	rs199625633	C	T	p.Asp730Asn
15	48789586	rs113512280	T	C	p.Ile724Val
15	48791183	rs752207298	A	C	p.Ser722Arg
15	48791184	rs1197990559	C	T	p.Ser722Asn
15	48791196	rs777526851	G	A	p.Thr718Met
15	48791235	rs1426292408	G	A	p.Ala705Val
15	48795991	rs778835898	C	A	p.Gln702His
15	48795999	rs745694291	G	A	p.Pro700Ser
15	48796004	rs764827921	G	A	p.Pro698Leu
15	48796007	rs769708437	T	C	p.Gln697Arg
15	48796022	rs955639059	A	T	p.Phe692Tyr
15	48796041	rs377621293	C	T	p.Ala686Thr
15	48796070	rs763691577	C	G	p.Gly676Ala
15	48796082	rs1399794395	T	C	p.Lys672Arg
15	48796106	rs1436966674	C	T	p.Gly664Glu
15	48796112	rs1292661774	T	C	p.Tyr662Cys
15	48796125	rs751517759	G	A	p.Arg658Trp
15	48796133	rs779915218	G	C	p.Thr655Arg
15	48797230	rs1393196845	A	G	p.Val651Ala
15	48797231	rs1335043561	C	T	p.Val651Met
15	48797233	rs1437690192	C	T	p.Arg650His
15	48797242		A	G	p.Leu647Pro
15	48797245	rs1238689648	C	T	p.Gly646Asp
15	48797257	rs1186742914	C	A	p.Gly642Val
15	48797260	rs781147556	G	A	p.Pro641Leu
15	48797281	rs752664023	G	A	p.Ser634Phe
15	48797290	rs913115111	G	C	p.Thr631Ser
15	48797297	rs140503215	C	T	p.Val629Ile
15	48797297	rs140503215	C	G	p.Val629Leu
15	48797302	rs746073643	C	T	p.Arg627His
15	48797324	rs1220853793	G	A	p.Pro620Ser
15	48797326	rs377686210	G	T	p.Thr619Asn
15	48797338	rs397515763	T	C	p.Asn615Ser
15	48800790	rs770393471	C	T	p.Arg609His
15	48800791	rs772574901	G	A	p.Arg609Cys
15	48800793	rs368283028	C	T	p.Gly608Glu
15	48800803	rs1159345180	C	T	p.Ala605Thr
15	48800844	rs1380921125	T	C	p.Asp591Gly
15	48800869	rs767293952	G	A	p.Leu583Phe
15	48800882	rs760582295	T	C	p.Ile578Met
15	48800883	rs886831673	ATGC	A	p.Ser577del

15	48800884	rs1239073737	T	C	p.Ile578Val
15	48800893	rs1259811604	C	T	p.Glu575Lys
15	48800899	rs1338923661	T	C	p.Met573Val
15	48802248	rs1418781732	G	C	p.Asn569Lys
15	48802261	rs763815231	C	T	p.Arg565Gln
15	48802279	rs141551765	G	A	p.Ala559Val
15	48802289	rs1239988676	C	T	p.Val556Met
15	48802289	rs1239988676	C	A	p.Val556Leu
15	48802304	rs751751494	C	T	p.Gly551Ser
15	48802315	rs112269822	A	G	p.Ile547Thr
15	48802316	rs759813328	T	C	p.Ile547Val
15	48802321	rs193922179	C	T	p.Arg545His
15	48802330	rs963564435	T	C	p.Asn542Ser
15	48802339	rs767893806	C	A	p.Arg539Leu
15	48802339	rs767893806	C	T	p.Arg539Gln
15	48802340	rs752999845	G	A	p.Arg539Trp
15	48802342	rs756455129	C	T	p.Gly538Asp
15	48802349	rs1479709398	G	T	p.Gln536Lys
15	48802351	rs754364317	A	G	p.Leu535Ser
15	48802352	rs1485432119	A	T	p.Leu535Ile
15	48805748	rs1441536824	C	T	p.Arg529Gln
15	48805760	rs1034682956	C	T	p.Arg525Gln
15	48805761	rs768253008	G	A	p.Arg525Trp
15	48805761	rs768253008	G	C	p.Arg525Gly
15	48805763	rs370575495	G	A	p.Thr524Met
15	48805763	rs370575495	G	C	p.Thr524Arg
15	48805770	rs1259324625	T	C	p.Thr522Ala
15	48805771	rs1470275032	G	T	p.Ser521Arg
15	48805772	rs749253325	C	T	p.Ser521Asn
15	48805774	rs143253318	C	G	p.Gln520His
15	48805787	rs775489067	C	T	p.Arg516Gln
15	48805805	rs776942896	G	A	p.Ser510Leu
15	48805814	rs968635035	T	C	p.Asn507Ser
15	48805830	rs762111810	C	T	p.Gly502Ser
15	48805830	rs762111810	C	G	p.Gly502Arg
15	48805832	rs1461938183	C	G	p.Gly501Ala
15	48805842	rs1392151738	G	A	p.Pro498Ser
15	48805843	rs1364476987	G	T	p.Asn497Lys
15	48805863	rs373751659	C	T	p.Val491Ile
15	48805863	rs373751659	C	A	p.Val491Phe
15	48807592	rs763431921	T	G	p.Glu487Ala
15	48807598	rs371985966	C	A	p.Arg485Leu
15	48807619	rs1198680390	T	C	p.Lys478Arg
15	48807634	rs754397542	C	T	p.Arg473Gln

15	48807635	rs767068276	G	A	p.Arg473Trp
15	48807637	rs4775765	C	T	p.Cys472Tyr
15	48807647	rs1418649312	G	C	p.Pro469Ala
15	48807655	rs1409489395	A	G	p.Ile466Thr
15	48807661	rs1166727485	C	T	p.Arg464His
15	48807662	rs587782943	G	A	p.Arg464Cys
15	48807679	rs749133312	T	C	p.Tyr458Cys
15	48807680	rs757105054	A	C	p.Tyr458Asp
15	48807682	rs141217134	C	T	p.Arg457His
15	48807698	rs781397493	A	G	p.Tyr452His
15	48807707	rs139058991	C	T	p.Val449Ile
15	48808383	rs750320579	G	A	p.Pro442Ser
15	48808391	rs568810058	C	T	p.Arg439Gln
15	48808392	rs1195398902	G	A	p.Arg439Trp
15	48808400	rs149873013	T	A	p.Tyr436Phe
15	48808418	rs771134832	G	A	p.Pro430Leu
15	48808421	rs368089138	C	T	p.Arg429Gln
15	48808421	rs368089138	C	A	p.Arg429Leu
15	48808430	rs146044644	G	A	p.Pro426Leu
15	48808431	rs532909030	G	A	p.Pro426Ser
15	48808437	rs1439533354	G	T	p.Gln424Lys
15	48808439	rs1298538974	G	C	p.Pro423Arg
15	48808442	rs139968089	C	T	p.Gly422Glu
15	48808448	rs1239273582	G	A	p.Pro420Leu
15	48808472	rs764925097	A	T	p.Val412Asp
15	48808474	rs1357102047	T	TGGA	p.Pro411dup
15	48808479	rs750279344	G	A	p.Pro410Ser
15	48808487	rs758241018	C	T	p.Gly407Asp
15	48808496	rs779930519	G	C	p.Pro404Arg
15	48808496	rs779930519	G	T	p.Pro404Gln
15	48808496	rs779930519	G	A	p.Pro404Leu
15	48808511	rs1363393532	G	A	p.Pro399Leu
15	48808512	rs886039155	G	C	p.Pro399Ala
15	48808521	rs756133487	G	A	p.Pro396Ser
15	48808530	rs983129867	T	C	p.Met393Val
15	48808532	rs534127494	G	C	p.Pro392Arg
15	48808532	rs534127494	G	A	p.Pro392Leu
15	48808533	rs749467972	G	C	p.Pro392Ala
15	48808538	rs746385384	G	A	p.Ser390Phe
15	48808539	rs779113310	A	T	p.Ser390Thr
15	48808549	rs368737502	G	C	p.Asn386Lys
15	48808555	rs747519215	A	C	p.Asp384Glu
15	48812859	rs1297680405	T	C	p.Thr382Ala
15	48812864	rs541960429	C	T	p.Arg380Lys

15	48812868	rs775971280	T	C	p.Ile379Val
15	48812871	rs747656840	G	A	p.Pro378Ser
15	48812885	rs762598979	G	A	p.Ala373Val
15	48812886	rs766162654	C	T	p.Ala373Thr
15	48812895	rs1191931914	C	A	p.Val370Phe
15	48812912	rs536588176	C	T	p.Arg364Gln
15	48812916	rs363855	C	T	p.Gly363Ser
15	48812918	rs1374436710	G	C	p.Ala362Gly
15	48812939	rs1290358505	TTGGTTA	T	p.Ile353_Thr354del
15	48812942	rs794728164	G	T	p.Thr354Asn
15	48812943	rs765232377	T	C	p.Thr354Ala
15	48812946	rs750653834	T	C	p.Ile353Val
15	48812955	rs1297018373	G	A	p.Pro350Ser
15	48812960	rs758751205	T	C	p.Gln348Arg
15	48812972	rs200388305	C	A	p.Arg344Leu
15	48812972	rs200388305	C	T	p.Arg344His
15	48812973	rs752010116	G	A	p.Arg344Cys
15	48812975	rs781690390	C	T	p.Gly343Glu
15	48812976	rs146726731	C	T	p.Gly343Arg
15	48812999	rs777219809	T	C	p.Tyr335Cys
15	48813002	rs1424049170	C	A	p.Gly334Val
15	48813008	rs748929044	C	T	p.Arg332His
15	48813009	rs1161109360	G	A	p.Arg332Cys
15	48813011	rs1345539075	A	G	p.Val331Ala
15	48818328	rs1289726476	T	C	p.Ile329Met
15	48818329	rs12324002	A	G	p.Ile329Thr
15	48818330	rs370955295	T	C	p.Ile329Val
15	48818334	rs771891777	T	A	p.Arg327Ser
15	48818335	rs775206410	C	G	p.Arg327Thr
15	48818335	rs775206410	C	T	p.Arg327Lys
15	48818339	rs760637902	T	C	p.Thr326Ala
15	48818341	rs768514422	C	G	p.Gly325Ala
15	48818344	rs763079155	T	C	p.Asp324Gly
15	48818344	rs763079155	T	A	p.Asp324Val
15	48818345	rs375661721	C	T	p.Asp324Asn
15	48818347	rs1183175645	G	A	p.Pro323Leu
15	48818350	rs755363622	G	A	p.Ser322Phe
15	48818362	rs756616651	C	A	p.Gly318Val
15	48818366	rs764470069	G	A	p.Pro317Ser
15	48818368	rs754353597	G	T	p.Pro316His
15	48818369	rs756687172	G	A	p.Pro316Ser
15	48818387	rs1215867426	T	G	p.Ser310Arg
15	48818402	rs758035051	T	C	p.Thr305Ala
15	48818410	rs779866501	C	A	p.Gly302Val

15	48818413	rs142888621	C	A	p.Gly301Val
15	48818416	rs1186527816	T	C	p.Glu300Gly
15	48818425	rs1235683402	C	T	p.Gly297Glu
15	48818430	rs151056963	A	C	p.Ile295Met
15	48818434	rs1390856365	G	C	p.Thr294Ser
15	48818450	rs1403216956	T	C	p.Ile289Val
15	48826296	rs772218768	T	G	p.Glu281Asp
15	48826296	rs772218768	T	A	p.Glu281Asp
15	48826307	rs775505429	T	C	p.Lys278Glu
15	48826315	rs553266395	G	T	p.Ala275Asp
15	48826318	rs1085307537	G	T	p.Pro274His
15	48826324	rs777025292	T	C	p.Lys272Arg
15	48826325	rs762276905	T	G	p.Lys272Gln
15	48826333	rs951026080	A	G	p.Phe269Ser
15	48826343	rs201669595	C	T	p.Val266Ile
15	48826345	rs762310407	G	A	p.Thr265Ile
15	48826363	rs751169871	C	T	p.Gly259Glu
15	48826367	rs146348130	G	T	p.Gln258Lys
15	48826376	rs781113082	C	T	p.Gly255Arg
15	48826384	rs1410263702	G	T	p.Ala252Asp
15	48826385	rs1287457819	C	T	p.Ala252Thr
15	48826397	rs1235048801	C	T	p.Asp248Asn
15	48826400	rs772038055	C	T	p.Val247Met
15	48829822	rs747049980	G	T	p.Thr241Lys
15	48829825	rs768744583	C	A	p.Arg240Leu
15	48829828	rs138990525	A	G	p.Ile239Thr
15	48829832	rs1436381119	T	C	p.Asn238Asp
15	48829846	rs770140872	C	T	p.Arg233His
15	48829849	rs773685409	C	T	p.Arg232His
15	48829856	rs763347530	G	A	p.Pro230Ser
15	48829857	rs1391600366	G	C	p.His229Gln
15	48829864	rs1229143855	T	C	p.Gln227Arg
15	48829875	rs910928261	C	T	p.Met223Ile
15	48829886	rs771509487	G	T	p.Pro220Thr
15	48829887	rs774754863	G	C	p.His219Gln
15	48829887	rs774754863	G	T	p.His219Gln
15	48829891	rs775219277	C	T	p.Gly218Asp
15	48829895	rs193922224	A	C	p.Trp217Gly
15	48829900	rs753703844	C	T	p.Arg215Gln
15	48829901	rs111687884	G	C	p.Arg215Gly
15	48829922	rs1468309094	G	C	p.Leu208Val
15	48829924	rs202002133	G	A	p.Thr207Met
15	48829925	rs1464303112	T	A	p.Thr207Ser
15	48829927	rs1290563746	T	G	p.Lys206Thr

15	48829937	rs1421272219	C	T	p.Val203Ile
15	48829943	rs748358548	C	T	p.Gly201Arg
15	48829946	rs1057036462	T	C	p.Ser200Gly
15	48829949	rs1221144366	G	C	p.Leu199Val
15	48829950	rs756408299	T	A	p.Gln198His
15	48829951	rs1311980908	T	C	p.Gln198Arg
15	48829954	rs895824095	C	T	p.Gly197Glu
15	48829969	rs578126575	T	C	p.Asn192Ser
15	48829972	rs771226686	C	A	p.Ser191Ile
15	48829976	rs147107676	T	C	p.Ile190Val
15	48829976	rs147107676	T	A	p.Ile190Phe
15	48888491	rs1487286173	T	C	p.Gln176Arg
15	48888500	rs1184165128	G	A	p.Thr173Ile
15	48888513	rs1472110875	T	C	p.Thr169Ala
15	48888519		C	T	p.Ala167Thr
15	48888524	rs1060501079	C	T	p.Arg165Gln
15	48888527	rs749490298	T	C	p.Asn164Ser
15	48888534	rs193922210	C	T	p.Ala162Thr
15	48888534	rs193922210	C	A	p.Ala162Ser
15	48888550	rs757577615	A	T	p.Asn156Lys
15	48888551	rs779490973	T	C	p.Asn156Ser
15	48888552	rs746352371	T	G	p.Asn156His
15	48888560	rs1228441560	C	G	p.Gly153Ala
15	48888563	rs1288527435	C	T	p.Ser152Asn
15	48888567	rs1180715983	C	G	p.Glu151Gln
15	48892335	rs868403743	C	T	c.442+1G>A
15	48892336	rs780624885	G	A	p.Pro148Ser
15	48892338	rs747815650	T	C	p.Gln147Arg
15	48892347	rs1389741787	T	C	p.His144Arg
15	48892348	rs769476277	G	C	p.His144Asp
15	48892384	rs542798262	C	T	p.Asp132Asn
15	48892408	rs764224168	T	C	p.Met124Val
15	48892413	rs1010750845	C	T	p.Arg122His
15	48892413	rs1010750845	C	A	p.Arg122Leu
15	48892419	rs753900024	T	C	p.Asn120Ser
15	48892419	rs753900024	T	A	p.Asn120Ile
15	48892420	rs761978915	T	C	p.Asn120Asp
15	48892425	rs765503809	T	C	p.His118Arg
15	48892427	rs201083095	T	A	p.Gln117His
15	48892428	rs777826174	T	C	p.Gln117Arg
15	48902925	rs748930708	T	C	p.Ile116Val
15	48902930	rs986042040	C	G	p.Arg114Thr
15	48902937	rs1301122201	C	G	p.Gly112Arg
15	48902969	rs778655626	G	A	p.Thr101Ile

15	48902987	rs922684362	G	A	p.Ser95Leu
15	48903012	rs747008489	G	T	p.His87Asn
15	48903015	rs769979790	G	A	p.Arg86Trp
15	48903023	rs1206249804	G	T	p.Pro83His
15	48905210	rs148007052	C	T	p.Val82Ile
15	48905231	rs886051252	G	A	p.Pro75Ser
15	48905257	rs774371494	T	A	p.Tyr66Phe
15	48905266	rs1303389437	T	C	p.Tyr63Cys
15	48905269	rs145942328	C	T	p.Arg62His
15	48905275	rs139788702	C	G	p.Gly60Ala
15	48905275	rs139788702	C	A	p.Gly60Val
15	48905287	rs1262119022	G	A	p.Pro56Leu
15	48936812	rs1258637670	G	A	p.Ala52Val
15	48936813	rs749989129	C	T	p.Ala52Thr
15	48936821	rs1382204819	C	T	p.Gly49Glu
15	48936821	rs1382204819	C	G	p.Gly49Ala
15	48936828	rs762400500	C	T	p.Gly47Ser
15	48936839	rs766081333	T	G	p.Lys43Thr
15	48936840	rs751270801	T	C	p.Lys43Glu
15	48936843	rs377722423	C	G	p.Ala42Pro
15	48936863	rs554167248	T	C	p.Lys35Arg
15	48936867	rs1365346856	C	T	p.Val34Met
15	48936867	rs1365346856	C	G	p.Val34Leu
15	48936876	rs371130701	C	T	p.Ala31Thr
15	48936877	rs778831047	C	A	p.Glu30Asp
15	48936884	rs193922245	T	C	p.Asn28Ser
15	48936888	rs25397	C	T	p.Ala27Thr
15	48936891	rs146267697	C	G	p.Asp26His
15	48936896	rs768993489	C	G	p.Gly24Ala
15	48936905	rs1489806847	G	A	p.Thr21Met
15	48936906	rs777027225	T	C	p.Thr21Ala
15	48936908	rs201309310	T	C	p.Tyr20Cys
15	48936914	rs770295085	G	C	p.Ala18Gly
15	48936914	rs770295085	G	A	p.Ala18Val
15	48936929	rs773614956	A	C	p.Phe13Cys
15	48936936	rs762468661	G	C	p.Leu11Val
15	48936950	rs774145378	A	G	p.Leu6Pro
15	48936954	rs759323371	G	A	p.Arg5Cys
15	48936959	rs149929989	C	G	p.Arg3Pro

Transcript	Consequ VEP Annotation	Flags	Allele Count ≤5	XX
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c.6557G>T	missense_variant		1	0
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c.6044A>T	missense_variant		15	7
c.5884T>C	missense_variant		1	1
c.5882G>T	missense_variant		2	2
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c.5386G>A	missense_variant		1	0
c.5177G>T	missense_variant		1	0
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c.1841T>C	missense_variant		3	1
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c.1133C>G	missense_variant		1	0
c.868G>T	missense_variant		2	0
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c.8542A>C	missense_variant	62	43
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c.8529C>A	missense_variant	1	1
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c.8523A>T	missense_variant	2	0
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c.8495G>A	missense_variant	6	4
c.8494A>G	missense_variant	3	1
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c.8366A>G	missense_variant	1	0
c.8363C>T	missense_variant	26	14
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c.8354C>A	missense_variant	1	1
c.8350C>T	missense_variant	1	0
c.8327G>A	missense_variant	4	2
c.8326C>G	missense_variant	2	1

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c.8299A>G	missense_variant		10	4
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c.8287A>G	missense_variant		2	1
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c.8257C>G	missense_variant		1	1
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c.8081G>A	missense_variant	1	1
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c.8060T>C	missense_variant	1	0
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c.7309A>G	missense_variant	1	1
c.7301C>G	missense_variant	1	0
c.7295G>C	missense_variant	1	1
c.7291A>G	missense_variant	1	1
c.7283T>C	missense_variant	4	3
c.7282A>G	missense_variant	1	0
c.7261G>A	missense_variant	11	1
c.7241G>A	missense_variant	9	6
c.7231G>A	missense_variant	4	4
c.7228C>T	missense_variant	1	1
c.7228C>G	missense_variant	1	0
c.7226T>C	missense_variant	1	0
c.7219A>G	missense_variant	3	2
c.7210G>A	missense_variant	20	5
c.7201G>T	missense_variant	1	1
c.7196A>G	missense_variant	2	1
c.7193C>G	missense_variant	2	0
c.7189A>G	missense_variant	5	1
c.7186T>C	missense_variant	1	0
c.7183G>A	missense_variant	1	1
c.7181G>A	missense_variant	2	0
c.7175A>G	missense_variant	1	0
c.7171C>T	missense_variant	2	2
c.7153G>C	missense_variant	1	0
c.7150G>A	missense_variant	3	1
c.7142A>G	missense_variant	1	0

c.7130T>C	missense_variant	1	1
c.7129A>G	missense_variant	3	2
c.7099G>A	missense_variant	6	3
c.7096G>A	missense_variant	1	0
c.7084G>C	missense_variant	1	1
c.7082C>T	missense_variant	2	0
c.7078A>C	missense_variant	1	0
c.7072G>A	missense_variant	55	20
c.7070C>G	missense_variant	2	0
c.7064G>A	missense_variant	1	0
c.7055C>T	missense_variant	1	0
c.7051G>C	missense_variant	1	0
c.7051G>A	missense_variant	4	2
c.7050C>G	missense_variant	3	2
c.7048A>G	missense_variant	1	1
c.7039A>G	missense_variant	1	0
c.7027G>T	missense_variant	1	1
c.7021A>G	missense_variant	1	0
c.7020C>G	missense_variant	1	1
c.7000A>T	missense_variant	6	1
c.6994C>T	missense_variant	2	2
c.6989delA	frameshift_variant	1	0
c.6989A>G	missense_variant	1	0
c.6983_6987delAG	frameshift_variant	1	0
c.6987C>G	missense_variant	201	104
c.6982C>T	stop_gained	1	0
c.6970G>A	missense_variant	3	2
c.6968C>T	missense_variant	1	1
c.6964T>C	missense_variant	1	0
c.6958G>T	missense_variant	1	1
c.6932G>A	missense_variant	7	3
c.6917G>A	missense_variant	5	2
c.6901A>T	missense_variant	1	0
c.6901A>C	missense_variant	1	1
c.6890C>T	missense_variant	8	3
c.6890C>G	missense_variant	1	0
c.6888G>T	missense_variant	1	0
c.6878A>G	missense_variant	1	1
c.6859G>C	missense_variant	7	4
c.6853G>T	missense_variant	1	0
c.6848G>A	missense_variant	1	1
c.6845G>A	missense_variant	21	10
c.6844C>T	missense_variant	4	1
c.6842A>C	missense_variant	1	0

c.6835G>A	missense_variant	3	2
c.6832C>G	missense_variant	45	26
c.6832C>T	missense_variant	947	532
c.6819G>A	missense_variant	9	5
c.6818T>C	missense_variant	3	3
c.6817A>G	missense_variant	1	0
c.6814T>C	missense_variant	1	0
c.6812C>T	missense_variant	1	1
c.6789G>A	missense_variant	1	0
c.6783A>C	missense_variant	7	4
c.6778G>A	missense_variant	2	2
c.6757G>A	missense_variant	1	0
c.6745G>A	missense_variant	2	2
c.6732G>A	missense_variant	9	6
c.6729G>T	missense_variant	1	0
c.6728G>A	missense_variant	12	7
c.6725G>A	missense_variant	5	1
c.6724C>T	missense_variant	3	2
c.6721G>C	missense_variant	1	1
c.6710T>A	missense_variant	1	1
c.6709G>A	missense_variant	4	2
c.6700G>A	missense_variant	209	93
c.6691A>C	missense_variant	1	1
c.6686A>G	missense_variant	1	1
c.6674A>G	missense_variant	1	1
c.6670A>G	missense_variant	1	0
c.6659G>A	missense_variant	3	1
c.6652G>A	missense_variant	1	0
c.6643C>A	missense_variant	1	1
c.6641C>G	missense_variant	1	0
c.6631G>T	missense_variant	1	0
c.6623A>G	missense_variant	8	3
c.6603G>A	missense_variant	1	0
c.6601A>G	missense_variant	7	5
c.6601A>T	missense_variant	2	1
c.6595G>A	missense_variant	3	1
c.6593C>A	missense_variant	1	0
c.6590A>G	missense_variant	1	0
c.6577G>A	missense_variant	8	3
c.6559G>A	missense_variant	3	2
c.6557G>A	missense_variant	1	0
c.6534T>A	missense_variant	3	1
c.6512C>T	missense_variant	1	1
c.6493G>T	missense_variant	2	1

c.6485A>G	missense_variant	2	0
c.6473T>G	missense_variant	2	0
c.6472A>G	missense_variant	1	1
c.6461C>G	missense_variant	2	1
c.6461C>T	missense_variant	6	1
c.6454G>A	missense_variant	1	0
c.6449G>A	missense_variant	1	1
c.6448C>T	missense_variant	2	1
c.6446A>T	missense_variant	1	1
c.6427A>T	missense_variant	6	1
c.6416A>G	missense_variant	2	1
c.6415C>T	missense_variant	1	1
c.6401C>T	missense_variant	1	1
c.6382A>G	missense_variant	1	1
c.6359G>A	missense_variant	1	0
c.6355G>C	missense_variant	1	0
c.6349A>G	missense_variant	1	0
c.6338A>T	missense_variant	4	3
c.6328A>G	missense_variant	1	1
c.6323G>A	missense_variant	2	0
c.6323G>T	missense_variant	1	0
c.6322C>A	missense_variant	1	0
c.6317C>T	missense_variant	1	0
c.6314A>T	missense_variant	1	1
c.6302C>T	missense_variant	55	30
c.6268G>C	missense_variant	1	1
c.6199G>A	missense_variant	1	1
c.6196G>A	missense_variant	2	2
c.6188C>T	missense_variant	1	1
c.6187G>A	missense_variant	1	1
c.6170G>A	missense_variant	1	1
c.6155G>A	missense_variant	1	1
c.6147T>G	missense_variant	1	1
c.6110A>G	missense_variant	25	2
c.6110A>C	missense_variant	3	1
c.6095C>G	missense_variant	3	1
c.6094A>T	missense_variant	1	1
c.6089G>C	missense_variant	1	0
c.6073G>T	missense_variant	108	58
c.6062C>T	missense_variant	1	0
c.6055G>A	missense_variant	6	0
c.6052G>A	missense_variant	49	25
c.6043G>A	missense_variant	1	0
c.6041T>C	missense_variant	2	1

c.6025G>A	missense_variant	1	0
c.6017T>C	missense_variant	1	0
c.6001C>T	missense_variant	1	1
c.5977G>A	missense_variant	3	3
c.5963C>T	missense_variant	8	7
c.5954C>T	missense_variant	2	2
c.5938G>C	missense_variant	1	0
c.5936T>C	missense_variant	1	1
c.5921T>C	missense_variant	3	2
c.5903G>A	missense_variant	1	1
c.5899G>T	missense_variant	3	2
c.5885_5886delAT	frameshift_variant	1	0
c.5876A>G	missense_variant	2	2
c.5842A>G	missense_variant	11	2
c.5837A>G	missense_variant	2	1
c.5816G>A	missense_variant	2	1
c.5786T>C	missense_variant	2	2
c.5785A>G	missense_variant	1	0
c.5776_5778delAA	inframe_deletion	1	1
c.5774A>G	missense_variant	1	0
c.5771A>G	missense_variant	2	2
c.5770C>A	missense_variant	1	1
c.5753A>G	missense_variant	3	2
c.5738A>G	missense_variant	1	0
c.5725A>T	missense_variant	1	1
c.5725A>G	missense_variant	1	1
c.5723C>T	missense_variant	1	0
c.5717G>A	missense_variant	11	7
c.5716C>T	missense_variant	1	1
c.5711C>T	missense_variant	1	1
c.5710A>G	missense_variant	1	0
c.5705A>G	missense_variant	1	0
c.5693A>G	missense_variant	1	1
c.5676A>G	missense_variant	1	1
c.5674A>G	missense_variant	6	2
c.5670G>C	missense_variant	1	1
c.5662A>T	missense_variant	1	1
c.5656C>G	missense_variant	2	0
c.5648A>G	missense_variant	2	1
c.5644A>G	missense_variant	1	0
c.5630A>G	missense_variant	2	2
c.5613C>A	missense_variant	1	0
c.5612G>A	missense_variant	1	1
c.5603C>T	missense_variant	4	3

c.5603C>G	missense_variant	3	1
c.5597T>C	missense_variant	1	0
c.5596A>G	missense_variant	11	5
c.5585A>G	missense_variant	1	1
c.5582G>A	missense_variant	4	3
c.5573A>G	missense_variant	15	6
c.5567T>A	missense_variant	2	2
c.5549G>A	missense_variant	1	0
c.5548C>T	missense_variant	2	2
c.5546A>G	missense_variant	1	1
c.5533G>C	missense_variant	2	0
c.5531C>G	missense_variant	1	0
c.5518C>T	missense_variant	4	1
c.5516A>T	missense_variant	9	7
c.5510C>G	missense_variant	3	1
c.5509C>T	missense_variant	2	1
c.5495G>A	missense_variant	1	0
c.5483C>A	missense_variant	2	1
c.5479A>G	missense_variant	1	0
c.5467G>A	missense_variant	1	1
c.5464G>T	missense_variant	1	0
c.5464G>A	missense_variant	4	0
c.5459G>A	missense_variant	2	1
c.5449G>A	missense_variant	3	0
c.5443G>A	missense_variant	4	0
c.5441A>G	missense_variant	2	0
c.5440A>G	missense_variant	1	1
c.5413G>A	missense_variant	1	0
c.5401G>A	missense_variant	1	1
c.5380C>T	missense_variant	1	1
c.5363G>C	missense_variant	1	0
c.5320C>A	missense_variant	2	1
c.5312G>A	missense_variant	6	4
c.5311C>T	missense_variant	5	4
c.5278T>G	missense_variant	1	0
c.5272G>A	missense_variant	1	1
c.5239C>T	missense_variant	1	0
c.5222C>T	missense_variant	1	1
c.5201A>T	missense_variant	5	2
c.5189A>C	missense_variant	3	0
c.5180G>A	missense_variant	5	1
c.5179C>T	missense_variant	2	1
c.5153T>C	missense_variant	1	1
c.5149A>C	missense_variant	1	0

c.5142G>A	missense_variant	4	3
c.5123G>A	missense_variant	2	0
c.5086T>C	missense_variant	1	1
c.5069T>G	missense_variant	1	1
c.5063T>C	missense_variant	3	1
c.5035A>C	missense_variant	7	3
c.5027C>T	missense_variant	1	1
c.5008T>C	missense_variant	1	1
c.4999G>C	missense_variant	1	0
c.4999G>A	missense_variant	10	4
c.4984A>T	missense_variant	1	0
c.4963C>T	missense_variant	1	1
c.4958A>C	missense_variant	1	0
c.4949A>G	missense_variant	1	1
c.4931G>A	missense_variant	3	0
c.4928C>A	missense_variant	1	1
c.4913A>G	missense_variant	2	2
c.4913A>C	missense_variant	1	0
c.4906G>A	missense_variant	2	1
c.4901C>T	missense_variant	1	1
c.4900C>T	missense_variant	1	1
c.4895G>A	missense_variant	8	4
c.4894C>T	missense_variant	1	0
c.4867A>G	missense_variant	1	0
c.4832A>G	missense_variant	2	0
c.4817-1_4816+1dup	splice_acceptor_variant	1	0
c.4809A>G	missense_variant	1	1
c.4804G>A	missense_variant	6	5
c.4787G>A	missense_variant	1	0
c.4772G>A	missense_variant	1	1
c.4750G>A	missense_variant	39	22
c.4738G>A	missense_variant	2	2
c.4736C>T	missense_variant	2	1
c.4727T>C	missense_variant	34	12
c.4718C>T	missense_variant	1	1
c.4666G>A	missense_variant	1	1
c.4663G>A	missense_variant	1	0
c.4652A>G	missense_variant	1	0
c.4650C>G	missense_variant	1	1
c.4640C>T	missense_variant	9	4
c.4631A>G	missense_variant	2	1
c.4630A>C	missense_variant	1	0
c.4622G>A	missense_variant	2	2
c.4616G>A	missense_variant	3	0

c.4609G>A	missense_variant	1	1
c.4598A>G	missense_variant	2	1
c.4592C>G	missense_variant	1	0
c.4589G>A	missense_variant	2	2
c.4568G>A	missense_variant	5	2
c.4567C>G	missense_variant	1	1
c.4567C>T	stop_gained	1	1
c.4544C>G	missense_variant	1	0
c.4541C>T	missense_variant	3	2
c.4530C>G	missense_variant	1	0
c.4492A>G	missense_variant	2	0
c.4484C>T	missense_variant	1	0
c.4483A>C	missense_variant	1	1
c.4444G>C	missense_variant	1	0
c.4444G>A	missense_variant	2	0
c.4441A>G	missense_variant	107	57
c.4437C>G	missense_variant	3	1
c.4421T>C	missense_variant	3	2
c.4420A>C	missense_variant	1	0
c.4411G>A	missense_variant	1	1
c.4406G>A	missense_variant	5	1
c.4405C>T	missense_variant	3	2
c.4390C>G	missense_variant	1	1
c.4390C>T	missense_variant	1	1
c.4364T>G	missense_variant	1	0
c.4358C>G	missense_variant	1	1
c.4358C>T	missense_variant	9	4
c.4357C>G	missense_variant	1	0
c.4342G>A	missense_variant	10	3
c.4328C>T	missense_variant	3	2
c.4327G>A	missense_variant	3	1
c.4321G>A	missense_variant	11	10
c.4316C>G	missense_variant	7	2
c.4313G>A	missense_variant	7	3
c.4312A>G	missense_variant	3	1
c.4309C>G	missense_variant	1	0
c.4306G>T	missense_variant	2	2
c.4306G>A	missense_variant	146	34
c.4294G>A	missense_variant	1	0
c.4283G>A	missense_variant	3	2
c.4277G>C	missense_variant	6	1
c.4270C>G	missense_variant	57	25
c.4261C>T	missense_variant	1	0
c.4250A>G	missense_variant	2	2

c.4240C>T	missense_variant	1	0
c.4235T>C	missense_variant	1	1
c.4231A>C	missense_variant	1	1
c.4221G>C	missense_variant	1	0
c.4214T>G	missense_variant	31	15
c.4208C>A	missense_variant	1	0
c.4208C>T	missense_variant	1	0
c.4198T>C	missense_variant	1	0
c.4196G>C	missense_variant	2	1
c.4190G>T	missense_variant	3	0
c.4190G>C	missense_variant	1	0
c.4163G>A	missense_variant	6	3
c.4162C>T	missense_variant	1	0
c.4157C>G	missense_variant	1	0
c.4152G>A	missense_variant	1	0
c.4150A>G	missense_variant	9	4
c.4137C>G	missense_variant	1	1
c.4128G>T	missense_variant	1	0
c.4124G>A	missense_variant	1	1
c.4117A>G	missense_variant	3	0
c.4114C>T	missense_variant	4	2
c.4109G>A	missense_variant	1	0
c.4107T>A	missense_variant	2	0
c.4106A>G	missense_variant	1	0
c.4078A>G	missense_variant	1	0
c.4075A>G	missense_variant	3	1
c.4064T>C	missense_variant	2	0
c.4057G>A	missense_variant	2	1
c.4055C>A	missense_variant	1	1
c.4054C>T	missense_variant	2	1
c.4052G>A	missense_variant	1	0
c.4046G>C	missense_variant	1	0
c.4034G>A	missense_variant	1	0
c.4018A>G	missense_variant	1	0
c.4012G>A	missense_variant	3	3
c.4009G>A	missense_variant	1	1
c.4007A>G	missense_variant	2	0
c.4001G>A	missense_variant	2	1
c.3988G>A	missense_variant	1	0
c.3971A>G	missense_variant	1	0
c.3970A>G	missense_variant	1	0
c.3962C>T	missense_variant	1	0
c.3937G>A	missense_variant	1	0
c.3923A>C	missense_variant	1	1

c.3910A>T	missense_variant	1	0
c.3896C>T	missense_variant	75	46
c.3890A>G	missense_variant	304	182
c.3878G>A	missense_variant	3	1
c.3877A>C	missense_variant	1	0
c.3867T>G	missense_variant	1	0
c.3854A>G	missense_variant	1	0
c.3845A>G	missense_variant	12	6
c.3830C>G	missense_variant	1	0
c.3823A>C	missense_variant	3	1
c.3808A>C	missense_variant	1	1
c.3797A>T	missense_variant	14	9
c.3785G>A	missense_variant	5	4
c.3770T>A	missense_variant	1	1
c.3766A>G	missense_variant	1	1
c.3742A>G	missense_variant	1	0
c.3740A>T	missense_variant	25	4
c.3737C>G	missense_variant	1	1
c.3736C>T	missense_variant	1	1
c.3730G>A	missense_variant	5	2
c.3718G>A	missense_variant	8	0
c.3715A>G	missense_variant	1	1
c.3709A>G	missense_variant	1	1
c.3689T>C	missense_variant	2	0
c.3688A>C	missense_variant	3	1
c.3674C>T	missense_variant	6	5
c.3652A>G	missense_variant	1	1
c.3633C>A	missense_variant	1	1
c.3610A>G	missense_variant	1	1
c.3605G>A	missense_variant	19	11
c.3605G>T	missense_variant	3	2
c.3604A>G	missense_variant	5	2
c.3595delG	frameshift_variant	1	1
c.3593T>C	missense_variant	2	0
c.3592A>G	missense_variant	3	1
c.3586G>A	missense_variant	1	0
c.3575G>A	missense_variant	22	9
c.3573T>A	missense_variant	1	1
c.3571G>A	missense_variant	2	0
c.3565A>G	missense_variant	1	0
c.3560A>G	missense_variant	2	1
c.3542C>T	missense_variant	1	1
c.3531G>C	missense_variant	1	1
c.3523A>G	missense_variant	8	5

c.3514G>A	missense_variant		16	10
c.3509G>A	missense_variant		347	146
c.3503A>G	missense_variant		18	8
c.3487G>A	missense_variant		1	0
c.3463G>A	missense_variant	lc_lof,os_lof	1	0
c.3455C>T	missense_variant		8	3
c.3454G>A	missense_variant		14	8
c.3452C>T	missense_variant		2	1
c.3446A>G	missense_variant		9	3
c.3442C>G	missense_variant		8499	4339
c.3439T>A	missense_variant		2	2
c.3437T>C	missense_variant		1	0
c.3428G>A	missense_variant		1	1
c.3422C>T	missense_variant		234	113
c.3415G>C	missense_variant		11	8
c.3410G>T	missense_variant		1	1
c.3410G>A	missense_variant		12	4
c.3409C>T	missense_variant		1	1
c.3409C>G	missense_variant		2	1
c.3405T>A	missense_variant		1	0
c.3403A>G	missense_variant		5	4
c.3395C>T	missense_variant		2	1
c.3389A>G	missense_variant		4	2
c.3376G>A	missense_variant		5	2
c.3374G>A	missense_variant		5	0
c.3361C>T	missense_variant		1	0
c.3359A>T	missense_variant		4	0
c.3356G>A	missense_variant		1	0
c.3345T>G	missense_variant		1	1
c.3340A>G	missense_variant		3	2
c.3334A>G	missense_variant		1	1
c.3334A>T	missense_variant		3	3
c.3326A>G	missense_variant		2	1
c.3322A>T	missense_variant		1	1
c.3316A>G	missense_variant		1	0
c.3315C>G	missense_variant		2	1
c.3307A>G	missense_variant		1	1
c.3295G>A	missense_variant		6	2
c.3254A>G	missense_variant		1	1
c.3229T>A	missense_variant		1	0
c.3226A>G	missense_variant		9	3
c.3226A>C	missense_variant		8	4
c.3224G>T	missense_variant		1	1
c.3224G>A	missense_variant		6	1

c.3223C>T	missense_variant	3	0
c.3214G>A	missense_variant	2	2
c.3211A>G	missense_variant	2	1
c.3206C>T	missense_variant	3	1
c.3205A>G	missense_variant	1	1
c.3197G>C	missense_variant	11	5
c.3184G>A	missense_variant	4	0
c.3181C>G	missense_variant	1	0
c.3172G>C	missense_variant	1	0
c.3169A>C	missense_variant	1	1
c.3145G>A	missense_variant	5	5
c.3144delT	frameshift_variant	1	0
c.3142A>G	missense_variant	4	3
c.3133A>G	missense_variant	2	2
c.3128A>G	missense_variant	2	1
c.3123C>A	missense_variant	2	1
c.3112C>T	missense_variant	1	0
c.3102G>A	missense_variant	1	0
c.3100A>G	missense_variant	1	1
c.3089A>G	missense_variant	72	27
c.3077T>C	missense_variant	182	89
c.3061A>G	missense_variant	1	0
c.3058A>G	missense_variant	129	59
c.3043G>A	missense_variant	5	4
c.3035C>A	missense_variant	1	1
c.3031G>A	missense_variant	1	0
c.3026C>G	missense_variant	17	5
c.3018G>T	missense_variant	1	0
c.3016G>A	missense_variant	10	1
c.3014A>T	missense_variant	1	1
c.3013G>A	missense_variant	5	1
c.2995A>G	missense_variant	2	1
c.2992A>T	missense_variant	1	0
c.2990C>G	missense_variant	1	0
c.2980G>A	missense_variant	5	2
c.2957C>T	missense_variant	1	0
c.2956G>A	missense_variant	355	146
c.2950G>T	missense_variant	2	0
c.2950G>A	missense_variant	6	4
c.2935G>A	missense_variant	3	1
c.2934C>G	missense_variant	107	55
c.2931G>A	missense_variant	1	1
c.2930T>G	missense_variant	4	2
c.2929A>G	missense_variant	1	0

c.2927G>A	missense_variant	29	12
c.2926C>T	missense_variant	4	1
c.2921G>A	missense_variant	9	4
c.2915C>T	missense_variant	1	0
c.2911A>G	missense_variant	1	0
c.2909C>T	missense_variant	4	3
c.2908C>T	missense_variant	1	0
c.2903C>G	missense_variant	1	1
c.2902A>T	missense_variant	3	2
c.2894A>C	missense_variant	1	0
c.2893G>C	missense_variant	6	4
c.2893G>A	missense_variant	1	0
c.2887G>C	missense_variant	1	1
c.2884T>C	missense_variant	1	0
c.2883G>T	missense_variant	6	2
c.2877C>A	missense_variant	2	0
c.2861G>A	missense_variant	1	0
c.2851C>T	missense_variant	1	1
c.2833G>T	missense_variant	1	1
c.2823G>T	missense_variant	3	2
c.2819G>T	missense_variant	1	0
c.2816G>A	missense_variant	1	0
c.2792G>C	missense_variant	1	0
c.2791G>A	missense_variant	3	0
c.2786C>T	missense_variant	1	0
c.2785A>G	missense_variant	3	1
c.2785A>T	missense_variant	1	1
c.2773C>G	missense_variant	4	1
c.2771G>T	missense_variant	1	1
c.2753C>G	missense_variant	59	27
c.2749T>C	missense_variant	1	0
c.2746G>C	missense_variant	1	0
c.2746G>A	missense_variant	13	7
c.2735A>T	missense_variant	2	0
c.2735A>G	missense_variant	3	3
c.2732T>C	missense_variant	1	1
c.2731A>G	missense_variant	1	0
c.2730T>G	missense_variant	1	0
c.2721A>T	missense_variant	1	0
c.2713G>A	missense_variant	1	1
c.2711A>G	missense_variant	4	2
c.2710A>G	missense_variant	1	0
c.2704A>G	missense_variant	1	1
c.2702C>T	missense_variant	1	0

c.2683A>G	missense_variant	3	2
c.2678A>G	missense_variant	1	1
c.2674G>A	missense_variant	2	0
c.2666T>A	missense_variant	3	1
c.2665C>G	missense_variant	1	0
c.2662A>T	missense_variant	1	1
c.2641G>A	missense_variant	1	0
c.2629T>G	missense_variant	1	1
c.2613A>C	missense_variant	1	0
c.2606C>A	missense_variant	1	1
c.2600A>G	missense_variant	20	9
c.2596A>G	missense_variant	1	0
c.2590A>G	missense_variant	3	1
c.2582G>A	missense_variant	1	0
c.2579G>A	missense_variant	1	0
c.2573T>C	missense_variant	1	0
c.2547C>G	missense_variant	9	4
c.2531T>C	missense_variant	5	3
c.2521A>T	missense_variant	1	1
c.2515G>A	missense_variant	1	1
c.2514G>C	missense_variant	1	1
c.2508T>A	missense_variant	2	1
c.2504A>G	missense_variant	1	1
c.2491G>A	missense_variant	1	1
c.2486T>C	missense_variant	1	0
c.2473C>T	missense_variant	1	0
c.2451T>G	missense_variant	2	0
c.2434G>A	missense_variant	11	7
c.2422A>G	missense_variant	1	0
c.2411C>T	missense_variant	1	0
c.2393A>G	missense_variant	2	2
c.2390T>G	missense_variant	2	1
c.2377C>T	missense_variant	1	1
c.2344A>G	missense_variant	4	2
c.2339A>T	missense_variant	1	1
c.2318G>T	missense_variant	1	0
c.2316C>G	missense_variant	1	0
c.2291T>C	missense_variant	1	0
c.2290G>A	missense_variant	8	5
c.2290G>C	missense_variant	1	1
c.2267T>C	missense_variant	2	2
c.2239A>G	missense_variant	1	0
c.2228G>A	missense_variant	5	3
c.2224C>G	missense_variant	1	0

c.2208T>G	missense_variant	2	2
c.2206A>G	missense_variant	1	0
c.2197A>G	missense_variant	3	1
c.2188G>A	missense_variant	2	0
c.2170A>G	missense_variant	1	0
c.2166T>G	missense_variant	1	0
c.2165G>A	missense_variant	1	1
c.2153C>T	missense_variant	2	1
c.2114C>T	missense_variant	1	0
c.2106G>T	missense_variant	1	0
c.2098C>T	missense_variant	1	0
c.2093C>T	missense_variant	4	1
c.2090A>G	missense_variant	1	1
c.2075T>A	missense_variant	2	0
c.2056G>A	missense_variant	20	10
c.2027G>C	missense_variant	2	1
c.2015A>G	missense_variant	2	2
c.1991G>A	missense_variant	2	1
c.1985A>G	missense_variant	2	1
c.1972C>T	missense_variant	1	1
c.1964C>G	missense_variant	1	1
c.1952T>C	missense_variant	1	0
c.1951G>A	missense_variant	2	1
c.1949G>A	missense_variant	3	1
c.1940T>C	missense_variant	1	1
c.1937G>A	missense_variant	2	2
c.1925G>T	missense_variant	1	1
c.1922C>T	missense_variant	2	2
c.1901C>T	missense_variant	1	0
c.1892C>G	missense_variant	1	0
c.1885G>A	missense_variant	6	2
c.1885G>C	missense_variant	1	0
c.1880G>A	missense_variant	11	2
c.1858C>T	missense_variant	2	0
c.1856C>A	missense_variant	12	3
c.1844A>G	missense_variant	4	3
c.1826G>A	missense_variant	4	1
c.1825C>T	missense_variant	2	1
c.1823G>A	missense_variant	1	0
c.1813G>A	missense_variant	1	1
c.1772A>G	missense_variant	1	0
c.1747C>T	missense_variant	6	4
c.1734A>G	missense_variant	2	0
c.1730_1732delGC	inframe_deletion	1	0

c.1732A>G	missense_variant	1	1
c.1723G>A	missense_variant	1	0
c.1717A>G	missense_variant	1	0
c.1707C>G	missense_variant	1	1
c.1694G>A	missense_variant	2	0
c.1676C>T	missense_variant	4	3
c.1666G>A	missense_variant	1	1
c.1666G>T	missense_variant	1	0
c.1651G>A	missense_variant	1	1
c.1640T>C	missense_variant	2	1
c.1639A>G	missense_variant	2	0
c.1634G>A	missense_variant	1	0
c.1625A>G	missense_variant	1	1
c.1616G>T	missense_variant	1	1
c.1616G>A	missense_variant	1	0
c.1615C>T	missense_variant	3	0
c.1613G>A	missense_variant	12	2
c.1606C>A	missense_variant	1	1
c.1604T>C	missense_variant	2	1
c.1603T>A	missense_variant	3	2
c.1586G>A	missense_variant	5	4
c.1574G>A	missense_variant	1	0
c.1573C>T	missense_variant	5	3
c.1573C>G	missense_variant	1	0
c.1571C>T	missense_variant	19	9
c.1571C>G	missense_variant	1	0
c.1564A>G	missense_variant	1	1
c.1563C>A	missense_variant	1	1
c.1562G>A	missense_variant	4	2
c.1560G>C	missense_variant	2	2
c.1547G>A	missense_variant	5	3
c.1529C>T	missense_variant	3	1
c.1520A>G	missense_variant	2	2
c.1504G>A	missense_variant	1	1
c.1504G>C	missense_variant	5	3
c.1502G>C	missense_variant	1	0
c.1492C>T	missense_variant	1	1
c.1491C>A	missense_variant	1	0
c.1471G>A	missense_variant	1	1
c.1471G>T	missense_variant	2	1
c.1460A>C	missense_variant	9	5
c.1454G>T	missense_variant	2	2
c.1433A>G	missense_variant	1	1
c.1418G>A	missense_variant	4	2

c.1417C>T	missense_variant	4	2
c.1415G>A	missense_variant	282640	129392
c.1405C>G	missense_variant	1	0
c.1397T>C	missense_variant	1	1
c.1391G>A	missense_variant	2	1
c.1390C>T	missense_variant	1	1
c.1373A>G	missense_variant	1	1
c.1372T>G	missense_variant	1	1
c.1370G>A	missense_variant	6	5
c.1354T>C	missense_variant	1	1
c.1345G>A	missense_variant	19	10
c.1324C>T	missense_variant	2	1
c.1316G>A	missense_variant	14	4
c.1315C>T	missense_variant	1	0
c.1307A>T	missense_variant	1	1
c.1289C>T	missense_variant	7	3
c.1286G>A	missense_variant	7	2
c.1286G>T	missense_variant	2	0
c.1277C>T	missense_variant	12	4
c.1276C>T	missense_variant	1	0
c.1270C>A	missense_variant	1	0
c.1268C>G	missense_variant	1	0
c.1265G>A	missense_variant	23	15
c.1259C>T	missense_variant	1	1
c.1235T>A	missense_variant	3	1
c.1230_1232dupTC	inframe_insertion	1	0
c.1228C>T	missense_variant	2	0
c.1220G>A	missense_variant	4	0
c.1211C>G	missense_variant	4	3
c.1211C>A	missense_variant	2	0
c.1211C>T	missense_variant	1	0
c.1196C>T	missense_variant	1	0
c.1195C>G	missense_variant	1	0
c.1186C>T	missense_variant	1	1
c.1177A>G	missense_variant	5	3
c.1175C>G	missense_variant	8	2
c.1175C>T	missense_variant	1	1
c.1174C>G	missense_variant	2	0
c.1169C>T	missense_variant	6	1
c.1168T>A	missense_variant	1	0
c.1158C>G	missense_variant	15	9
c.1152T>G	missense_variant	1	1
c.1144A>G	missense_variant	1	1
c.1139G>A	missense_variant	2	0

c.1135A>G	missense_variant	1	0
c.1132C>T	missense_variant	1	0
c.1118C>T	missense_variant	2	1
c.1117G>A	missense_variant	7	5
c.1108G>T	missense_variant	2	0
c.1091G>A	missense_variant	1	1
c.1087G>A	missense_variant	11	3
c.1085C>G	missense_variant	1	0
c.1058_1063delTA/	inframe_deletion	1	0
c.1061C>A	missense_variant	1	0
c.1060A>G	missense_variant	1	1
c.1057A>G	missense_variant	16	2
c.1048C>T	missense_variant	1	1
c.1043A>G	missense_variant	1	1
c.1031G>T	missense_variant	1	0
c.1031G>A	missense_variant	6	2
c.1030C>T	missense_variant	3	1
c.1028G>A	missense_variant	2	1
c.1027G>A	missense_variant	52	19
c.1004A>G	missense_variant	1	0
c.1001G>T	missense_variant	1	1
c.995G>A	missense_variant	3	0
c.994C>T	missense_variant	1	0
c.992T>C	missense_variant	1	0
c.987A>G	missense_variant	2	2
c.986T>C	missense_variant	623	338
c.985A>G	missense_variant	4	0
c.981A>T	missense_variant	1	1
c.980G>C	missense_variant	3	3
c.980G>A	missense_variant	1	0
c.976A>G	missense_variant	1	0
c.974G>C	missense_variant	1	1
c.971A>G	missense_variant	1	1
c.971A>T	missense_variant	6	4
c.970G>A	missense_variant	3	2
c.968C>T	missense_variant	1	1
c.965C>T	missense_variant	2	1
c.953G>T	missense_variant	1	0
c.949C>T	missense_variant	1	0
c.947C>A	missense_variant	1	0
c.946C>T	missense_variant	3	1
c.928A>C	missense_variant	3	2
c.913A>G	missense_variant	7	5
c.905G>T	missense_variant	1	0

c.902G>T	missense_variant	51	26
c.899A>G	missense_variant	1	0
c.890G>A	missense_variant	3	2
c.885T>G	missense_variant	4	3
c.881C>G	missense_variant	1	0
c.865A>G	missense_variant	1	0
c.843A>C	missense_variant	6	3
c.843A>T	missense_variant	1	0
c.832A>G	missense_variant	9	6
c.824C>A	missense_variant	1	0
c.821C>A	missense_variant	1	1
c.815A>G	missense_variant	1	0
c.814A>C	missense_variant	3	1
c.806T>C	missense_variant	1	0
c.796G>A	missense_variant	4	2
c.794C>T	missense_variant	3	0
c.776G>A	missense_variant	2	1
c.772C>A	missense_variant	1	1
c.763G>A	missense_variant	5	2
c.755C>A	missense_variant	4	2
c.754G>A	missense_variant	2	0
c.742G>A	missense_variant	1	0
c.739G>A	missense_variant	13	7
c.722C>A	missense_variant	1	1
c.719G>T	missense_variant	1	0
c.716T>C	missense_variant	2	1
c.712A>G	missense_variant	1	0
c.698G>A	missense_variant	5	0
c.695G>A	missense_variant	1	1
c.688C>T	missense_variant	4	0
c.687C>G	missense_variant	1	1
c.680A>G	missense_variant	1	0
c.669G>A	missense_variant	1	0
c.658C>A	missense_variant	1	0
c.657C>G	missense_variant	3	2
c.657C>A	missense_variant	1	0
c.653G>A	missense_variant	2	1
c.649T>G	missense_variant	1	0
c.644G>A	missense_variant	1	0
c.643C>G	missense_variant	4	4
c.622C>G	missense_variant	1	0
c.620C>T	missense_variant	3	2
c.619A>T	missense_variant	5	4
c.617A>C	missense_variant	1	0

c.607G>A	missense_variant	1	0
c.601G>A	missense_variant	4	3
c.598A>G	missense_variant	1	0
c.595C>G	missense_variant	1	0
c.594A>T	missense_variant	1	0
c.593A>G	missense_variant	1	0
c.590G>A	missense_variant	2	0
c.575A>G	missense_variant	1	0
c.572G>T	missense_variant	2	1
c.568A>G	missense_variant	1	1
c.568A>T	missense_variant	1	1
c.527A>G	missense_variant	4	1
c.518C>T	missense_variant	1	0
c.505A>G	missense_variant	1	1
c.499G>A	missense_variant	1	1
c.494G>A	missense_variant	4	1
c.491A>G	missense_variant	1	0
c.484G>A	missense_variant	1	0
c.484G>T	missense_variant	1	1
c.468T>A	missense_variant	1	0
c.467A>G	missense_variant	2	1
c.466A>C	missense_variant	6	4
c.458G>C	missense_variant	1	0
c.455G>A	missense_variant	1	0
c.451G>C	missense_variant	1	0
c.442+1G>A	splice_donor_variant	1	0
c.442C>T	missense_variant	6	3
c.440A>G	missense_variant	1	0
c.431A>G	missense_variant	1	1
c.430C>G	missense_variant	2	1
c.394G>A	missense_variant	1	1
c.370A>G	missense_variant	4	3
c.365G>A	missense_variant	3	0
c.365G>T	missense_variant	1	0
c.359A>G	missense_variant	5	1
c.359A>T	missense_variant	1	1
c.358A>G	missense_variant	1	1
c.353A>G	missense_variant	9	3
c.351A>T	missense_variant	3	1
c.350A>G	missense_variant	5	2
c.346A>G	missense_variant	2	2
c.341G>C	missense_variant	1	1
c.334G>C	missense_variant	1	0
c.302C>T	missense_variant	2	0

c.284C>T	missense_variant		3	2
c.259C>A	missense_variant		2	2
c.256C>T	missense_variant		3	1
c.248C>A	missense_variant		1	0
c.244G>A	missense_variant		1	1
c.223C>T	missense_variant		1	1
c.197A>T	missense_variant		1	0
c.188A>G	missense_variant		1	1
c.185G>A	missense_variant		15	9
c.179G>C	missense_variant		1	1
c.179G>T	missense_variant		1	1
c.167C>T	missense_variant		2	0
c.155C>T	missense_variant	mnv	4	3
c.154G>A	missense_variant		2	0
c.146G>A	missense_variant		2	2
c.146G>C	missense_variant		1	0
c.139G>A	missense_variant		5	2
c.128A>C	missense_variant		1	1
c.127A>G	missense_variant		1	0
c.124G>C	missense_variant		15	7
c.104A>G	missense_variant		1	1
c.100G>A	missense_variant		1	1
c.100G>C	missense_variant		1	1
c.91G>A	missense_variant		3	2
c.90G>T	missense_variant		1	0
c.83A>G	missense_variant		13	6
c.79G>A	missense_variant		133	64
c.76G>C	missense_variant		13	6
c.71G>C	missense_variant		1	0
c.62C>T	missense_variant		9	6
c.61A>G	missense_variant		1	1
c.59A>G	missense_variant		40	26
c.53C>G	missense_variant		1	1
c.53C>T	missense_variant		1	1
c.38T>G	missense_variant		4	2
c.31C>G	missense_variant		2	0
c.17T>C	missense_variant		1	0
c.13C>T	missense_variant		3	0
c.8G>C	missense_variant		3	3

185 variants in 293 people

116 XX

XY	Allele Number	Polyphen2_HVAR_scor	SIFT4G_score	MutationTaster_pred
0	31406	0.999	0.003	D
0	250964	0.996	0	D
1	251378	0.999	0.002	D
0	250962	0.997	0.002	D
0	250890	0.979	0.002	D
0	250878	0.999	0.002	D
1	251284	0.998	0.007	D
1	251234	1	0	D
1	251008	1	0	D
8	281722	0.8	0.001	D
0	250844	0.913	0	D
0	250854	0.883	0	D
1	251182	0.988	0.013	D
1	251284	1	0.001	D
1	251268	0.999	0.019	D
1	282776	1	0.001	D
1	251342	0.998	0.001	D
0	251252	0.995	0.001	D
0	251314	0.982	0.062	D
1	251406	0.982	0.005	D
2	251412	0.998	0.016	D
1	251348	0.996	0.002	D
0	251324	0.967	0	D
0	251326	0.996	0.003	D
1	251280	0.899	0.003	D
1	251340	0.991	0.001	D
0	251470	1	0.001	D
1	31352	0.996	0.002	D
1	251460	0.997	0.017	D
1	251418	1	0.002	D
1	251452	0.986	0.002	D
2	251430	0.991	0.081	D
1	251250	0.996	0	D
0	251006	0.992	0	D
1	251212	0.999	0	D
2	251342	0.999	0.002	D
1	251274	0.998	0.001	D
6	282652	0.996	0.002	D
1	251468	1	0.001	D
0	251468	1	0.002	D
0	251468	0.998	0	D
0	250798	0.997	0.001	D

2	250872	0.966	0.055 D
1	251072	0.1	0.02 D
1	251022	0.006	0.465 D
1	251022	0.006	0.465 D
0	251126	0.016	1 N
1	251126	0	0.159 D
1	251170	0.138	0.042 D
1	251126	0.154	0.489 D
1	251096	0.987	0.005 D
1	251118	0.984	0.089 D
2	251108	0.058	0.47 D
0	251164	0.216	0.155 D
0	282572	0.073	0.503 D
19	282580	0.006	0.626 D
1	251194	0.185	0.34 D
0	251184	0.398	0.141 D
0	251180	0.016	1 D
3	251200	0.991	0.187 D
2	282622	0.352	0.15 D
0	251216	0.039	0.24 D
0	251242	0.691	0.498 D
2	251322	0.656	0.029 D
0	251346	0.001	0.327 N
1	251334	0.588	0.02 D
2	251354	0.002	0.493 D
2	282766	0.039	0.38 D
0	251422	0.023	0.065 N
0	251418	0.001	0.333 D
3	251418 .		.
1	251440	0.396	0.808 D
3	251424	0.039	0.076 D
1	251438	0.001	0.888 D
3	251446	0.04	0.732 D
1	251434	0.992	0.001 D
0	31396	0.28	0.098 D
0	251444	0.966	0.928 D
1	251442	0.054	0.224 D
12	282820	0.548	0.106 D
1	251428	0.182	0.546 D
1	251430	0.005	0.732 D
0	31408	0.039	0.772 N
1	31404	0.991	0.065 D
2	282764	0.078	0.3 D
1	251286	0.066	0.118 D

10	251286 .	.	D
1	31394	0.001	0.677 N
10	251344	0	0.116 N
2	282742	0.016	0.042 N
1	251348	0	0.073 D
10	282752	0.039	0.391 D
6	251334	0.453	0.042 D
0	31396	0.01	0.518 N
1	251326	0	0.305 N
1	282626	0.321	0.133 D
1	251198	0.398	0.353 D
0	251192	0.22	0.159 D
1	31404	0	0.548 N
0	251132	0.002	0.564 N
1	251062	0.034	0.328 D
2	250796	0.204	0.284 N
0	282592	0	0.852 N
1	251234	0.002	0.654 N
5	282658	0	0.741 N
2	251258	0	0.697 N
0	282674	0	0.049 N
1	251304	0.007	0.806 N
1	251328	0	0.359 N
1	251366	0	0.29 D
3	282766	0.001	0.404 D
1	251410	0.051	0.129 D
0	251418	0.002	0.248 D
1	31390	0.039	0.042 N
8	282838	0.968	0.029 D
55	282868	0.001	0.408 D
1	31398	0.966	0.041 D
1	31398	0.966	0.003 D
5	282864	0.711	0.513 D
6	251462	0.058	0.207 D
107	282862	0.001	0.003 D
1	282884	0.956	0.014 D
18	251476	0.2	0.064 D
0	251474	0.002	0.574 D
3	282882	0.063	0.16 D
2	282886	0.042	0.052 D
0	251476	0.23	0.022 D
1	251478	0.995	0.09 D
10	282880	0.285	0.349 D

2	251450	0.002	0.681 N
0	251438	0.004	0.389 N
2	251428	0.001	0.482 D
0	31410	0.001	0.351 N
0	251424	0.027	0.611 N
1	251404	0.444	0.017 D
0	251390	0.059	0.564 D
0	251382	0.002	0.393 D
0	251368	0.185	0.003 D
11	251368	0.887	0.049 D
5	282776	0.029	0.081 D
1	251314	0.364	0.016 D
1	251312	0.352	0.008 D
0	251302	0.021	0.173 D
0	249436	0.714	0.003 D
3	281132	0.419	0.188 D
3	249720	0.34	0.613 D
7	281854	0.183	0.614 D
0	250670	0.989	0.054 D
1	250864	1	0.001 D
1	251030	0.999	0.001 D
1	251038	0.58	0.026 D
51	282534	0.027	0.444 N
1	251266	0.015	0.939 D
1	251342	0.301	0.336 D
1	251378	0.913	0.159 D
0	251406	0.894	0.008 D
0	251410	0.025	0.04 N
7	251396	0.001	0.324 N
1	251410	0.113	0.522 D
1	251398	0.002	0.452 D
1	251400 .	.	.
0	251280	0.994	0.131 D
0	251280	0.998	0.031 D
0	251282	0.899	0.319 D
37	282620	1	0.061 D
2	251204	0.694	0.144 N
10	282590	0.006	1 N
1	251062	0.013	0.162 N
1	251062	0.013	1 N
0	251028	0.876	0.226 D
1	250942	0.956	0.212 D
1	31392	0.988	0.652 D
1	250880	1	0.037 D

3	250918	0.192	0.422 D
1	250880	0.982	0.095 D
1	250862	1	0.011 D
1	250806	0.973	0.194 D
2	250766	0.997	0.097 D
1	250482	0.061	0.054 D
2	249628	0.761	0.011 D
1	31400	0.382	0.139 D
1	250040	0.998	0.012 D
1	250168	0.992	0.085 D
23	281648	0.656	0.377 D
1	31400	0.912	0.067 D
5	281700	0.975	0.002 D
1	250524	0.578	0.542 D
0	250616	0.535	0.402 D
2	282074	0.026	0.538 D
1	250564	0.589	0.136 D
1	250220	0.992	0.436 D
0	251248	0.966	0.513 D
2	282650	0.847	0.72 D
2	251244	0.704	0.915 D
4	282648	0.927	0.112 D
2	282670	0.982	0.058 D
11	251296	0.992	0.456 D
0	251252	0.354	0.036 D
6	282628	0.04	1 D
1	251244	0.995	0.543 D
1	251232	0.997	0.019 D
2	282620	0.273	0.17 D
1	251194	0.995	0.058 D
1	251164	0.989	0.139 D
5	251158	0.995	0.034 D
1	251172	0.982	0.094 D
0	251164	0.992	0.447 D
1	251142	0.298	0.076 D
9	282454	0.207	0.042 D
6	251396	0.005	0.846 D
1	251414 .	.	.
1	251416	1	0.06 D
2	251412	0.982	0.184 D
2	251406	0.995	0.097 D
0	31398	0.956	0.793 D
0	251366	0.999	0.003 D
5	282756	0.999	0.033 D

0	251360	0.873	0.152 D
2	282758	0.5	0.531 D
0	251326	0.657	0.037 D
1	282714	0.989	0.006 D
0	251284	0.285	0.002 D
14	282708	0.992	0.242 D
1	251186	0.64	0.037 D
0	251150	0.029	0.012 D
0	31386	0.274	0.309 D
1	251108	0.01	0.755 D
2	251092	0.006	0.159 D
17	282484	0.002	1 N
1	251012	0.002	1 D
0	250992	0.026	1 D
1	251168	0.038	0.588 D
1	251168	0.005	0.421 D
1	251216	0.728	0.002 D
1	251220	0.012	0.002 D
0	251240	0.092	0.565 D
1	251258	0.034	0.292 D
0	251222	0.012	0.046 D
0	251262	0.014	0.854 N
1	251260	0.001	0.762 N
1	251256	0.007	0.653 N
10	251238	0.055	0.14 N
3	251202	0.002	0.498 D
0	251172	0.008	1 D
0	251140	0.369	0.015 D
1	251140	0.158	0.208 D
1	251110	0.315	0.345 D
1	251078	0.037	0.56 D
15	282192	0.12	0.296 D
0	251032	0.01	0.249 D
1	251046	0.001	0.038 D
2	282446	0.008	0.218 D
4	251066	0.011	0.018 D
1	251062	0.055	0.009 D
0	31404	0.999	0.001 D
2	251064	0.029	0.116 D
1	251060	0.043	0.131 D
0	251058	0.994	0.123 D
1	250990	0.007	0.254 D
2	250990	0.037	0.136 D
1	250996	0.017	0.469 N

0	250946	0.534	0.09 D
1	282342	0.103	0.214 D
3	282266	0.787	0.558 D
1	250870	0.019	0.818 D
0	250830	0.138	0.079 D
2	250804	0.249	0.095 D
1	250838	0.659	0.031 D
35	282216	0.201	0.062 D
2	282214	0.522	0.616 D
1	250828	0.171	0.289 D
1	250834	0.77	0.052 D
1	250838	0.811	0.552 D
2	250838	0.06	0.925 D
1	282200	0.809	0.201 D
0	250852	0.006	0.392 D
1	250864	0.148	0.366 D
0	250814	0.019	0.268 D
1	250762	0.058	0.89 D
0	250740	0.039	0.01 D
5	250370	0.355	0.128 D
0	251174	0.23	0.415 D
1	251186 .	.	.
1	31412	0.192	0.069 D
1	251150 .	.	.
97	282598	0.385	0.078 N
1	251180 .	.	A
1	251214	0.011	0.547 D
0	251230	0.316	0.129 D
1	251258	0.987	0.005 D
0	251246	0.832	0.004 D
4	282628	0.498	0.125 N
3	251252	0.703	0.273 D
1	251346	0.417	0.021 D
0	251346	0.005	0.96 D
5	282666	0.474	0.05 D
1	251282	0.737	0.273 D
1	251298	0.6	0.149 P
0	251298	0.324	0.007 D
3	251306	0.784	0.118 D
1	251312	0.905	0.01 D
0	251332	0.038	1 D
11	251286	0.992	0.737 D
3	251282	0.998	0.015 D
1	251332	0.227	0.23 D

1	251276	0.966	0.001 D
19	282676	0.578	0.094 D
415	282676	0.856	0.074 D
4	282670	0.002	0.21 D
0	282700	0.053	0.315 D
1	31404	0.005	0.358 D
1	251282	0.93	0.019 D
0	251270	0.357	0.024 D
1	251240	0.954	0.074 D
3	251154	0.5	0.389 D
0	251066	0.098	0.219 N
1	250920	0.062	0.483 D
0	250764	0.004	0.203 D
3	282378	0.954	0.382 D
1	250996	0.991	0.429 D
5	250998	0.982	0.8 D
4	282394	0.603	0.042 D
1	250968	0.751	0.016 D
0	251024	0.999	0.002 D
0	251034	0.9	0.419 D
2	282442	0.815	0.023 D
116	282430	0.121	0.152 N
0	251016	0.848	0.199 D
0	251026	0.995	0.285 D
0	251012	0.669	0.176 D
1	251002	0.253	0.106 D
2	282384	0.992	0.012 D
1	251020	0.996	0.013 D
0	250978	0.998	0.15 D
1	250974	0.999	0.161 D
1	250922	0.023	0.906 D
5	282250	0.989	0.008 D
1	31390	0.954	0.427 D
2	251260	0.926	0.457 D
1	251260	0.833	0.661 D
2	251244	0.999	0.095 D
1	251216	0.999	0.05 D
1	251262	0.996	0.081 D
5	282630	0.146	0.92 D
1	251234	0.11	0.712 D
1	251234	1	0.002 D
2	282550	0.996	0.064 D
0	251122	0.678	0.003 D
1	250964	0.021	0.126 D

2	251014	0.016	0.753 N
2	251054	0.192	0.902 D
0	251048	0.005	0.579 D
1	251046	0.662	0.044 D
5	251046	0.478	0.081 D
1	251026	0.867	0.124 D
0	251030	0.997	0.035 D
1	251026	0.998	0.006 D
0	251030	0.003	1 D
5	251000	0.995	0.084 D
1	250946	0.022	0.043 D
0	250940	0	0.156 D
0	250824	0.997	0.007 D
0	250684	0.001	1 D
1	250658	0.321	0.026 D
1	250646	0.125	0.639 D
1	250642	0.001	0.506 D
1	250594	0	0.735 N
0	31404	0.089	0.134 D
2	281838	0.721	0.066 D
1	250448	0.385	0.088 D
1	31390	0.306	0.413 D
1	250382	0.192	0.059 D
0	250366	0.265	0.3 D
25	282090	0.326	0.105 N
0	250992	0.339	0.167 D
0	251142	0.005	0.618 D
0	251138	0.057	0.227 D
0	251122	0.041	0.141 D
0	251142	0.003	1 D
0	251068	0.007	0.021 D
0	31396	0.389	0.463 D
0	251032	0.042	0.005 D
23	251022	0.412	0.479 N
2	251022	0.018	0.601 N
2	282380	0.033	0.295 D
0	250976	0.033	0.295 D
1	250970	0.252	1 D
50	282240	0.109	0.758 D
1	250700	0.393	0.03 D
6	281986	0.491	0.361 D
24	281978	0.301	0.19 D
1	250304	0.019	0.786 D
1	250266	0.969	0.066 D

1	251152	0.029	0.306 D
1	251216	0.952	0.163 D
0	251232	0.575	0.031 D
0	251184	0.575	0.359 D
1	282526	0.874	0.028 D
0	251092	0.334	0.554 D
1	250998	0.076	0.682 N
0	250994	0.557	0.261 N
1	250880	0.652	0.489 D
0	250772	0.103	0.093 D
1	281976	0.999	0.015 D
1	250864	.	.
0	250888	0.252	0.706 D
9	250900	0.001	0.637 N
1	250878	0.007	0.846 D
1	250834	0.999	0.085 D
0	251078	0.307	0.578 D
1	251074	0.058	0.891 D
0	251088	.	.
1	251084	0.334	0.174 D
0	251084	0.492	0.399 D
0	251090	0.484	0.316 D
1	251058	0.158	0.344 N
1	251028	0.492	0.125 D
0	31400	0.224	0.091 D
0	251056	0.001	1 D
1	251042	0.825	0.162 D
4	282396	0.278	0.503 D
0	250984	0.94	0.019 D
0	31400	0.228	0.066 D
1	251026	0.334	0.041 D
1	251020	0.992	0.078 D
0	250976	0.334	0.46 D
0	250898	0.998	0.023 D
4	250910	0.97	0.589 D
0	250662	0.068	0.083 D
0	250806	0.037	0.532 D
2	282218	0.484	0.234 D
1	250900	0.415	1 D
1	250930	0.492	1 D
0	250958	0.492	0.198 D
1	250956	0.773	0.011 D
0	250970	0.412	0.019 D
1	250890	0.825	0.325 D

2	250890	0.022	0.253 D
1	250924	0.018	0.905 D
6	282314	0.089	1 D
0	31408	0.412	0.048 D
1	250868	0.266	0.16 D
9	250824	0.492	0.135 D
0	282158	0.011	0.653 D
1	250530	0.782	0.111 D
0	250490	0.828	0.076 D
0	250500	0.028	0.225 D
2	282676	0.842	0.167 D
1	251260	0.666	0.37 D
3	282656	0.916	0.002 D
2	282656	0.823	0.415 D
2	251272	0.995	0.642 D
1	251260	0.988	0.423 D
1	31398	0.996	0.043 D
1	251248	0.721	0.18 D
1	251256	0.429	0.394 D
0	251218	0.264	0.865 D
1	251206	0.996	0.226 D
4	251206	0.995	0.06 D
1	251204	0.845	0.195 D
3	251208	0.787	0.241 D
4	251202	0.969	0.32 D
2	251208	0.952	1 D
0	251196	0.952	0.605 D
1	251250	0.001	0.896 D
0	251282	0.979	0.418 D
0	251254	0.266	0.217 D
1	251218	0.038	0.025 D
1	250922	0.999	0.072 D
2	250880	0.098	0.633 D
1	282186	0.912	0.017 D
1	250580	0.335	0.174 D
0	250560	0.587	0.342 D
1	250430	0.996	0.012 D
0	251096	0.996	0.006 D
3	282610	0.994	0.019 D
3	251216	0.671	0.145 D
4	282650	0.98	0.805 D
1	251268	0.996	0.004 D
0	251354	0.929	0.128 D
1	251356	0.989	0.12 D

1	251338	0.711	0.168 D
2	251348	0.998	0.319 D
0	251386	0.556	0.113 D
0	251366	0.053	0.005 D
2	279638	0.838	0.103 D
4	251044	0.833	0.266 D
0	251120	0.999	0.132 D
0	251220	0.999	0.035 D
1	251208	0.297	0.337 D
6	282608	0.05	0.219 D
1	251200	0.992	0.186 D
0	251136	0.999	0.421 D
1	251104	0.138	0.742 D
0	251042	0.415	0.011 D
3	251250	0.997	0.288 D
0	31402	0.057	0.428 D
0	251290	0.706	0.088 D
1	251290	0.077	0.223 D
1	251318	1	0.007 D
0	251332	0.965	0.104 D
0	251322	0.963	0.195 D
4	282728	0.005	0.072 D
1	251312	0.983	0.019 D
1	251344	0.016	0.672 D
2	251298	0.201	0.438 D
1	31400	.	.
0	251252	0.999	0.011 D
1	251218	0.804	0.346 D
1	251144	0.529	0.07 D
0	251002	0.998	0.027 D
17	281920	0.173	0.016 D
0	282618	0.503	0.134 D
1	251240	0	0.428 N
22	282694	0	0.362 N
0	31402	0.999	0.223 D
0	251326	0.182	0.334 D
1	251314	0.028	0.234 D
1	251320	0.076	0.776 D
0	31398	0.858	0.408 D
5	282682	0.014	0.434 D
1	251288	0	0.393 D
1	251278	0.078	0.187 D
0	251208	0.947	0.097 D
3	251166	0.026	0.619 N

0	251108	0.002	0.216 D
1	282372	0.006	0.421 D
1	31388	0.898	0.051 D
0	250808	0.998	0.026 D
3	282514	0.464	0.116 D
0	251110	0.07	1 D
0	251110		A
1	251128	0.755	0.198 D
1	251130	0.999	0.002 D
1	251132	0.03	0.12 N
2	282494	0.493	0.775 D
1	31402	0.302	0.246 D
0	251108	0.987	0.282 D
1	251270	1	0.024 D
2	251270	0.999	0.007 D
50	282652	0.077	0.291 D
2	251272	0.992	0.029 D
1	31376	0	0.58 N
1	251290	0.004	0.282 N
0	251314	0.062	0.853 D
4	282664	0.997	0.118 D
1	282638	0.998	0.002 D
0	251302	0.047	0.32 D
0	251302	0.812	0.123 D
1	251286	0.761	0.034 D
0	31384	0.231	0.516 D
5	282622	0.102	0.295 D
1	251238	0.002	0.742 D
7	282556	0.019	0.307 D
1	251246	0.76	0.073 D
2	251240	0.23	0.353 D
1	282698	0.924	0.309 D
5	282700	0.025	0.399 N
4	282724	0.5	0.22 D
2	251370	0.396	0.182 D
1	251354	0.253	0.154 D
0	251344	0.009	0.668 D
112	282734	0.379	0.3 D
1	251400	0.765	0.172 D
1	251432	0.997	0.092 D
5	251426	0.931	0.54 D
32	282832	0.578	0.178 D
1	251422	0.977	0.1 D
0	251436	0.026	0.053 D

1	251416	0.998	0.043 D
0	251436	0.002	0.491 D
0	251442	0.998	0.039 D
1	251418	0.989	0.045 D
16	282836	0.31	0.226 D
1	251376	0.021	0.851 D
1	251376	0	0.251 D
1	251376	0.003	0.246 D
1	251378	0.999	0.06 D
3	251380	1	0.018 D
1	251380	0.999	0.024 D
3	282700	0.88	0.136 D
1	251310	0.88	0.007 D
1	251324	0.975	0.001 D
1	251312	0.096	0.246 D
5	282718	0.061	0.4 D
0	251320	0.003	0.729 D
1	251306	0.001	0.118 N
0	251334	0.001	0.57 D
3	251340	0.018	0.499 N
2	251316	0.988	0.096 D
1	251330	0.095	0.747 D
2	251348	0.685	0.887 D
1	251348	0.425	0.846 D
1	251418	0.554	0.89 D
2	251428	0.001	0.462 D
2	251392	0.066	0.774 D
1	251352	0.933	0.001 D
0	251334	0.403	0.056 D
1	251320	0.004	0.418 D
1	31404	0.239	0.607 D
1	251312	0.01	0.668 D
1	251276	0.454	0.109 D
1	251234	0.03	0.753 D
0	282644	0.001	0.203 N
0	251228	0.994	0.04 D
2	282658	0.255	0.139 D
1	251238	0.001	1 D
1	31404	0.996	0.578 D
1	251094	0.457	0.016 D
1	251082	0.012	1 D
1	251108	0.987	0.042 D
1	251176	0.794	0.401 D
0	251314	0.34	0.427 D

1	251330	0.995	0.261 D
29	282724	0.998	0.001 D
122	282758	0.995	0.092 D
2	251352	0.562	1 D
1	251346	0.801	0.252 D
1	251338	0.995	0.122 D
1	251308	0.652	0.074 D
6	251272	0.253	0.01 D
1	251016	0.033	0.407 D
2	251068	0.014	0.652 D
0	251146	0.027	0.384 D
5	251128	0.002	0.658 D
1	251120	0.112	0.842 D
0	251144	0.383	0.196 D
0	251136	0.98	0.018 D
1	250880	0.053	0.293 D
21	250892	0.14	0.12 D
0	250806	0.77	0.057 D
0	250794	0.265	0.046 D
3	250768	0.136	0.351 D
8	250246	0.997	0.244 D
0	250290	0.97	0.554 D
0	251468	0.019	1 D
2	251480	0.237	0.486 D
2	251478	0.003	0.561 D
1	251474	0.01	0.222 D
0	251482	0.982	0.025 D
0	251480	0.01	0.657 D
0	31404	0.007	0.29 D
8	251460	0.001	0.486 D
1	251460	0.034	0.177 D
3	251458	0.016	0.419 D
0	31414	.	.
2	251422	0.007	0.07 D
2	251412	0.034	0.2 D
1	245352	0.003	0.461 D
13	250838	0.001	0.739 N
0	251184	0.376	0.193 D
2	251142	0.02	0.155 D
1	251268	0.989	0.139 D
1	251378	0.042	0.367 D
0	251436	0.005	0.625 D
0	251470	0.058	0.154 D
3	251470	0.001	0.554 D

6	282836	0.081	0.186 D
201	282838	0.003	0.17 A
10	251440	0.207	0.122 D
1	251438	0.001	0.706 N
1	31402	0.996	0.03 D
5	282870	0.056	0.133 D
6	282878	0.408	0.36 D
1	282882	0.996	0.054 D
6	251474	0.138	0.519 D
4160	282868	0.011	0.39 P
0	251470	0.038	0.477 N
1	251484	0.635	0.046 D
0	251480	1	0.001 D
121	282882	0.999	0.042 D
3	282882	0.163	0.563 D
0	251474	0.219	0.386 D
8	282874	0.615	0.088 D
0	251482	0.761	0.037 D
1	251482	0.219	0.279 D
1	251478	0.995	0.039 D
1	251470	0.982	0.051 D
1	282868	0.997	0.024 D
2	282878	0.01	0.331 N
3	282854	0.999	0.025 D
5	251458	0.413	0.067 D
1	251418	0.939	0.076 D
4	282780	0.406	0.279 D
1	251404	0.982	0.225 D
0	251316	0.207	0.039 D
1	251260	0.013	0.184 D
0	251476	0.761	0.201 D
0	251476	0.558	0.138 D
1	251476	0.992	0.114 D
0	251478	0.833	0.091 D
1	251484	0.926	0.165 D
1	251482	0.982	0.324 D
0	251480	0.982	0.185 D
4	282882	0.119	0.292 D
0	251478	0.001	0.349 N
1	251470	0.987	0.406 D
6	251470	0.97	0.12 D
4	282874	0.97	0.207 D
0	251452	0.402	0.131 D
5	282848	0.019	0.133 D

3	282854	0.877	0.025 D
0	251456	0.997	0.162 D
1	282854	0.97	0.083 D
2	251492	0.991	0.185 D
0	251496	0.97	0.094 D
6	282908	0.903	0.461 D
4	282902	0.871	0.031 D
1	251492	0.994	0.077 D
1	251486	1	0.002 D
0	251488	0.26	0.374 D
0	282892	1	0.069 D
1	31406	.	.
1	251488	0.047	0.392 D
0	251480	0.519	0.177 D
1	251474	0.022	1 A
1	282862	0.174	0.031 D
1	251434	0.971	0.015 D
1	251384	0.131	0.182 D
0	251366	0.014	0.327 D
45	282632	0.992	0.017 D
93	282202	0.001	0.177 D
1	251240	0.034	0.454 N
70	282688	0	0.204 N
1	251396	0.068	0.247 D
0	251436	0.754	0.182 D
1	31392	0.999	0.002 D
12	251444	0.998	0.001 D
1	251464	0.022	0.492 N
9	251456	0.01	0.777 N
0	251462	0.057	0.136 D
4	282862	0.003	0.575 D
1	251480	0.067	0.165 D
1	251476	0	0.253 N
1	251480	0.999	0.001 D
3	282870	0.593	0.027 D
1	251468	0.008	0.386 D
209	282840	0.19	0.38 D
2	31380	0.963	0.002 D
2	282854	0.688	0.27 D
2	251464	0.7	0.31 D
52	282834	0.995	0.102 D
0	251466	0.016	0.219 D
2	251462	0.211	0.215 D
1	251466	0.002	0.461 D

17	282840	0.997	0.171 D
3	282846	0.998	0.034 D
5	282828	0.997	0.211 D
1	251462	0.003	0.049 N
1	251468	0.005	0.835 N
1	251460	0.328	0.026 D
1	251464	0.259	0.144 D
0	251458	0.001	0.812 N
1	251440	0.001	0.812 N
1	251454	0.767	0.406 D
2	282814	0.922	0.299 D
1	251442	0.778	0.544 D
0	251424	0.232	0.22 D
1	31360	0	0.421 D
4	251398	0	0.337 N
2	251384	0.006	0.016 D
1	251154	0.987	0.003 D
0	251438	0.18	0.058 D
0	251460	0.001	0.879 D
1	251464	0.179	0.029 D
1	251468	1	0.002 D
1	31380	0	0.417 N
1	251434	0.998	0.004 D
3	251440	1	0.001 D
1	251432	0.68	0.004 D
2	251432	0.145	0.052 D
0	251432	0.08	0.141 D
3	251424	0	0.455 N
0	31392	0.984	0.005 D
32	282662	0.95	0.003 D
1	250302	0.981	0.143 D
1	251234	0.882	0.577 D
6	282608	0.991	0.068 D
2	250728	0.116	0.001 D
0	250728	0.152	0.013 D
0	250288	0.836	0.006 D
1	250272	0.002	1 D
1	249926	0.954	0.026 D
1	251080	0.033	0.119 N
0	251076	0.999	0.004 D
2	251068	0.001	0.549 N
1	251070	0.058	0.201 N
0	251076	0.998	0.064 D
1	251070	0.175	0.14 D

1	250962	0.001	1 D
0	250896	0.997	0.029 D
2	251210	0	0.546 N
2	282656	0.017	0.606 N
1	251252	0.002	0.324 N
0	31380	0.04	0.201 N
1	251338	0.281	0.196 D
0	31392	0.007	1 D
1	251422	0.995	0.003 D
0	251436	0.693	0.312 D
11	282852	0.985	0.548 D
1	251452	0.038	0.058 D
2	251454	0.002	0.807 D
1	251450	0.992	0.238 D
1	251440	0.806	0.012 D
1	251450	0.09	0.728 N
5	251344	0.794	0.238 D
2	282452	0.662	0.009 D
0	251002	0.058	0.321 D
0	31352	0.92	0.044 D
0	250994	0.982	0.004 D
1	250996	0.984	0.201 D
0	251006	0.001	1 D
0	251018	0.03	0.158 D
1	251048	0.004	0.582 D
1	31386	0.006	0.741 D
2	251040	0.747	0.046 D
4	282390	0.014	0.775 D
1	251006	0.002	0.558 D
1	251300	0.087	0.099 D
0	282736	0.873	0.017 D
1	31410	0.016	0.791 N
0	251328	0.856	0.014 D
2	251350	0.991	0.006 D
0	251344	0.002	0.786 D
1	251336	0.077	0.241 D
1	251330	0.675	0.033 D
1	251436	0.04	0.202 D
3	282832	0.001	0.835 N
0	251434	0.003	0.336 D
0	251442	0.427	1 D
1	251436	0.706	0.01 D
2	282808	0.003	0.347 D
1	251396	0.388	0.043 D

0	282784	0.707	0.003 D
1	251384	0.719	0.011 D
2	251380	0.086	0.45 D
2	251360	0.996	0.707 D
1	251250	0.956	0.081 D
1	251488	0	0.897 N
0	251490	0	0.506 N
1	282900	0.63	0.003 D
1	251468	0.554	0.158 D
1	251320	0.6	0.109 D
1	251338	0.999	0.005 D
3	282774	0.999	0.087 D
0	251382	0.453	0.162 D
2	282838	0.005	0.131 D
10	282852	0.05	0.217 D
1	251462	0.632	0.154 D
0	251458	0.002	1 N
1	282862	0.497	0.521 D
1	282864	0.994	0.003 D
0	251412	0.99	0 D
0	251392	0.991	0.035 D
1	31396	0.13	0.127 D
1	31396	0.605	0.048 D
2	251440	0.987	0.008 D
0	251448	0.855	0.125 D
0	251450	0.887	0.137 D
0	251450	0.998	0.004 D
0	251420	0.115	0.177 D
1	251444	0.986	0.001 D
1	251442	0.956	0.269 D
4	282846	0.013	1 D
1	251446	0.097	0.258 D
9	282840	0.004	0.685 D
2	251416	0.081	0.187 D
9	251422	0.987	0.289 D
1	282838	0.098	0.011 D
3	282738	0.997	0.107 D
1	251334	0.998	0.002 D
1	251326	0.097	0.006 D
0	251324	0.138	0.268 D
1	251282	0.984	0.023 D
2	251224	0.991	0.052 D
2	251194	0.293	0.1 D
1	251210 .	.	.

0	251216	0.001	0.297 D
1	251096	0.971	0 D
1	31412	0.019	0.527 D
0	251206	0.995	0.149 D
2	251242	0.001	0.12 N
1	251240	0.887	0.076 D
0	31406	0.924	0.062 D
1	31406	0.428	0.135 D
0	251268	0.999	0 D
1	251286	0.138	0.16 D
2	251276	0.003	1 D
1	31396	0.997	0.004 D
0	251274	0.005	0.739 D
0	251250	0.444	0.75 D
1	251250	0.062	0.524 D
3	251250	0.966	0.189 D
10	251254	1	0.236 D
0	251232	0.171	0.786 D
1	251220	0.609	0.302 D
1	251204	0.119	1 D
1	251252	0.968	0.019 D
1	251272	0.992	0.265 D
2	251290	0.998	0.009 D
1	251290	0.995	0.378 D
10	282692	0.998	0.002 D
1	251290	0.999	0.006 D
0	251334	0.989	0.045 D
0	251326	0.697	0.559 D
2	251338	0.5	0.507 D
0	251340	0.995	0.017 D
2	251318	0.25	0.221 D
2	282682	0.992	0.001 D
0	31404	0.001	0.153 N
0	251234	0.749	0.006 D
2	251234	0.935	0.001 D
1	251228	0.142	0.098 D
0	251170	0.999	0.254 D
1	31400	0.578	0.029 D
0	250956	0.003	0.448 D
1	250956	0.188	0.464 D
4	282518	0.971	0.112 D
0	251150	0.396	0.038 D
0	31382	0.016	0.533 D
2	251218	0.968	0.065 D

2	251200	0.99	0.002 D
153248	282640	0	0 D
1	251244	0.138	0.374 D
0	251256	0.188	0.219 D
1	251264	0.002	0.081 D
0	251246	0.386	0.001 D
0	251242	0.078	0.014 N
0	251254	0.002	0.281 N
1	282616	0.719	0.131 D
0	251158	0.271	0.403 D
9	282468	0	0.573 N
1	251044	0.002	0.796 D
10	251124	0.885	0.582 D
1	251142	0.973	0.022 D
0	251268	0.899	0.687 D
4	251276	0.093	0.668 D
5	251256	0.002	0.552 N
2	282590	0.049	0.293 N
8	282654	0	0.331 N
1	251270	0	0.734 N
1	251268	0.002	0.924 N
1	251268	0.193	0.634 N
8	282580	0.522	0.005 D
0	251288	0.021	0.411 D
2	251256	0.006	0.194 D
1	31322 .	.	.
2	251226	0.017	0.653 D
4	251096	0.041	0.064 D
1	250990	0.207	0.692 N
2	250990	0.367	0.709 N
1	250990	0.001	0.8 N
1	250552	0.981	0.02 D
1	250570	0.956	0.205 D
0	250408	0.968	0.139 D
2	281696	0	0.657 N
6	250242	0.247	0.233 D
0	250242	0.068	0.321 D
2	250246	0.002	0.64 D
5	250224	0.165	0.053 D
1	31400	0.001	0.623 N
6	249668	0.015	0.223 D
0	31402	0.005	1 N
0	251184	0.527	0.028 D
2	251188	0.321	0.464 D

1	251222	0.055	0.785 D
1	251212	0.999	0 D
1	282660	0.003	0.68 D
2	251242	0.003	0.451 D
2	251258	0.033	0.432 N
0	251284	0.992	0.017 D
8	282662	0.999	0.006 D
1	251278	0.016	0.413 N
1	251352 .	.	.
1	251320	0.008	0.043 D
0	251334	0.062	0.015 D
14	251326	0	0.417 N
0	251332	0.012	0.4 D
0	251352	0.551	0.273 D
1	251322	0.997	0.021 D
4	251322	0.998	0.057 D
2	251326	0.998	0.005 D
1	251338	1	0.002 D
33	282706	1	0.045 D
1	251284	0.293	0.168 D
0	251274	0.999	0.002 D
3	251214	0.018	0.028 D
1	251234	0.869	0.001 D
1	251224	0.024	0.78 N
0	282812	0.05	0.045 D
285	282804	0.015	0.094 D
4	282802	0	0.344 D
0	251404	0.023	0.355 D
0	251400	0.202	0.389 D
1	31402	0.007	0.34 D
1	251412	0.062	0.049 D
0	251406	0.931	0.085 D
0	251416	0.741	0.051 D
2	251416	0.876	0.001 D
1	251418	0.677	0.013 D
0	31398	0.001	0.453 D
1	251412	0.765	0.001 D
1	251428	1	0.001 D
1	251424	0.012	0.276 D
1	251414	0.999	0.059 D
2	251424	0.999	0.037 D
1	251440	0.995	0.008 D
2	282826	0.001	0.216 N
1	251420	1	0 D

25	282816	0.053	0.093 D
1	251422	0	0.386 N
1	251426	1	0.01 D
1	282828	0.746	0.008 D
1	251398	0.138	0.978 D
1	31386	0.122	1 D
3	282834	0.003	0.425 D
1	251486	0.003	0.425 D
3	282840	0.253	0.153 D
1	251474	0.94	0.239 D
0	251478	0.935	0 D
1	251482	0.82	0.86 D
2	282790	0.913	0.2 D
1	251478	0.994	0.001 D
2	251474	0.527	0.198 D
3	251472	0.996	0.002 D
1	251428	1	0.002 D
0	251394	0.003	0.161 D
3	282566	0.98	0.002 D
2	282444	0.959	0.002 D
2	251194	0.767	0.057 D
1	250808	0.01	0.087 D
6	250692	0.998	0.002 D
0	251130	0.978	0.003 D
1	31406	0.982	0.009 D
1	251226	0.003	0.048 D
1	251276	0.985	0.024 D
5	251282	0.997	0.019 D
0	251292	0.947	0.011 D
4	251356	0.999	0.017 D
0	251368	0.023	0.324 D
1	251376	0.982	0.32 D
1	251372	0.067	0.469 D
1	251384	0.378	0.004 D
1	251398	0.995	0.053 D
1	251398	0.995	0.053 D
1	251392	1	0 D
1	251402	1	0.049 D
1	251394	0.083	0.052 D
0	251368	0.765	0.006 D
1	31406	0.992	0.009 D
1	251432	0.947	0.026 D
1	282822	0.373	0.234 D
1	251444	1	0.003 D

1	31398	0.989	0.157 D
1	251440	0.972	0.003 D
1	251438	0.451	0.042 D
1	251438	0.044	0.113 D
1	251448	0.995	0.029 D
1	251452	0.982	0.004 D
2	251454	0.999	0.026 D
1	251430	0.014	0.148 D
1	251414	0.037	0.213 D
0	251422	0	1 N
0	251422	0.004	0.003 D
3	282774	0.932	0.406 D
1	251390	0.987	0.01 D
0	251396	0.079	0.006 D
0	251386	0.257	0.004 D
3	251384	0.968	0.051 D
1	251396	0.956	0.013 D
1	31398	0.478	0.003 D
0	251390	0.257	0.009 D
1	31396	0.979	0 D
1	251338	0.956	0 D
2	282716	0.991	0 D
1	251286	0.995	0.04 D
1	251280	0.001	0.731 N
1	31402	0.979	0.132 D
1	31396		D
3	251162	0.537	0.01 D
1	251188	0.165	0.01 D
0	31404	0.045	0.337 D
1	251198	0.045	0.199 D
0	31396	0.551	0.251 D
1	250938	0.824	0.039 D
3	250860	0.991	0.412 D
1	250860	0.987	0.5 D
4	250786	0.003	0.923 D
0	250786	0.117	0.026 D
0	250746	0.036	0.291 D
6	250626	0.038	0.601 D
2	250588	0.986	0.031 D
3	281882	0.953	0.136 D
0	251318	0.001	0.989 D
0	31400	0.056	0.37 D
1	251390	0.999	0.005 D
2	251438	0.987	0.359 D

1	251380	0.968	0.369 D
0	282596	0.026	0.88 D
2	251096	0.985	0.004 D
1	250948	0.996	0 D
0	248978	0.956	0.284 D
0	249218	0.079	0.077 D
1	249388	0.956	0.136 D
0	249416	0.533	0.007 D
6	280762	0.987	0.002 D
0	249332	0.995	0.049 D
0	249332	0.998	0.015 D
2	31328	0.996	0.005 D
1	282770	0.939	1 D
2	251390	0.959	0.475 N
0	31302	0.994	0 D
1	251418	0.981	0 D
3	282778	0.987	1 D
0	251474	0.048	0.007 D
1	251472	0.001	0.009 D
8	282810	0.981	0.151 D
0	251486	0.899	0.354 N
0	251484	0.062	0.256 N
0	251484	0.005	0.834 N
1	251478	0	0.036 N
1	251480	0.026	0.118 D
7	282862	0	0.839 N
69	282844	0	0.088 N
7	282850	0.063	0.027 N
1	251458	0.003	0.191 N
3	282722	0.375	0.057 N
0	251388	0.016	0.549 N
14	282724	0.001	0.191 N
0	251270	0.025	0.132 N
0	251270	0.015	0.047 N
2	250964	0.888	0.271 N
2	250510	0.571	0.191 N
1	247494	0.245	0.063 D
3	245442	0.039	0.089 N
0	244960	0.119	0.025 N

177 XY

241491.787
120745.8935

Conservation (CLUSTAL)

Symbol	Conservative	Our conclusion	Alamut	Controls (allele count)
*	Yes	Pathogenic		1
*	Yes	Pathogenic		
*	Yes	Pathogenic		1
*	Yes	Pathogenic		
*	Yes	Pathogenic		1
*	Yes	Pathogenic		1
*	Yes	Pathogenic		
*	Yes	Pathogenic		
*	Yes	Pathogenic		1
*	Yes	Benign		
*	Yes	Benign		1
*	Yes	Benign		
*	Yes	Pathogenic		1
*	Yes	Pathogenic		
*	Yes	Pathogenic		
*	Yes	Pathogenic		1
*	Yes	Pathogenic		1
*	Yes	Pathogenic		1
*	Yes	Benign		
*	Yes	Pathogenic		1
*	Yes	Pathogenic		
*	Yes	Pathogenic		
*	Yes	Pathogenic		1
*	Yes	Pathogenic		1
*	Yes	Benign		
*	Yes	Pathogenic		1
*	Yes	Pathogenic		
*	Yes	Pathogenic		
*	Yes	Pathogenic		1
*	Yes	Pathogenic		1
*	Yes	Pathogenic		
*	Yes	Benign		3
*	Yes	Pathogenic		1
*	Yes	Pathogenic		1
*	Yes	Pathogenic		
*	Yes	Pathogenic		1
*	Yes	Pathogenic		1
*	Yes	Benign		
*	Yes	Pathogenic		1
*	Yes	Pathogenic		1
*	Yes	Pathogenic		
*	Yes	Pathogenic		

*	Yes	Benign	
*	Yes	Benign	2
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Pathogenic	
*	Yes	Benign	1
*	Yes	Benign	
:	No but simi	Benign	
:	No but simi	Benign	1
:	No but simi	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	2
*	Yes	Benign	2
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	1
	No	Benign	
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	3
	No	Benign	
*	Yes	Benign	
		Benign	2
*	Yes	Benign	1
*	Yes	Benign	3
:	No but simi	Benign	1
:	No but simi	Benign	2
*	Yes	Pathogenic	1
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	1
	No	Benign	
	No	Benign	1
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	3
*	Yes	Benign	

		Benign	VUS score = 3	
.	No	Benign		
:	No but simi	Benign		3
.	No	Benign		2
*	Yes	Benign		1
*	Yes	Benign		
*	Yes	Benign		5
:	No but simi	Benign		
	No	Benign		
*	Yes	Benign		
*	Yes	Benign		
*	Yes	Benign		1
	No	Benign		1
	No	Benign		
*	Yes	Benign		1
	No	Benign		2
	No	Benign		
	No	Benign		
	No	Benign		4
	No	Benign		1
.	No	Benign		
	No	Benign		
	No	Benign		
*	Yes	Benign		
*	Yes	Benign		2
*	Yes	Benign		1
*	Yes	Benign		1
*	Yes	Benign		
*	Yes	Benign		
*	Yes	Benign		
*	Yes	Benign	Poor quality	1
*	Yes	Benign	Poor quality	1
*	Yes	Benign		1
*	Yes	Benign		
*	Yes	Benign		
*	Yes	Pathogenic		4
*	Yes	Benign		
*	Yes	Benign		1
*	Yes	Benign		1
*	Yes	Benign		2
*	Yes	Benign		1
*	Yes	Benign		
*	Yes	Benign		

.	No	Benign	1
	No	Benign	
	No	Benign	
*	Yes	Benign	
:	No but simi	Benign	
*	Yes	Benign	1
.	No	Benign	1
.	No	Benign	1
*	Yes	Benign	1
*	Yes	Benign	3
	No	Benign	5
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	4
*	Yes	Benign	3
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Pathogenic	
*	Yes	Pathogenic	
*	Yes	Benign	1
:	No but simi	Benign	
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	
:	No but simi	Benign	
:	No but simi	Benign	3
*	Yes	Benign	
*	Yes	Benign	1
		Pathogenic	1
*	Yes	Benign	1
*	Yes	Pathogenic	
*	Yes	Benign	
*	Yes	Benign	
	No	Benign	2
	No	Benign	4
*	Yes	Benign	2
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Pathogenic	1

*	Yes	Benign	2
*	Yes	Benign	
*	Yes	Pathogenic	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	2
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Pathogenic	
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	4
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	2
:	YES	Benign	1
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	4
*	Yes	Benign	1
*	Yes	Benign	5
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Pathogenic	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	4
		Pathogenic	
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	2
*	Yes	Benign	
*	Yes	Pathogenic	1
*	Yes	Benign	3

*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Pathogenic	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	1
:	No but simi	Benign	
:	No but simi	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
:	No but simi	Benign	
:	No but simi	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	1
	No	Benign	1
	No	Benign	3
	No	Benign	
:	No but simi	Benign	5
*	Yes	Benign	
*	Yes	Benign	3
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	2
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	
:	No but simi	Benign	
*	Yes	Benign	1
:	No but simi	Benign	
*	Yes	Pathogenic	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
	No	Benign	1

:	No but simi	Benign	
:	No but simi	Benign	1
*	Yes	Benign	3
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
	No	Benign	
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
:	No but simi	Benign	
*	Yes	Benign	
*	Yes	Benign	3
*	Yes	Benign	1
		Pathogenic	1
*	Yes	Benign	
		Pathogenic	1
	No	Benign	
		Pathogenic	1
.	No	Benign	1
*	Yes	Benign	
*	Yes	Pathogenic	
:	No but simi	Benign	
	No	Benign	3
*	Yes	Benign	3
:	No but simi	Benign	1
:	No but simi	Benign	1
*	Yes	Benign	3
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	2
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Pathogenic	2
*	Yes	Benign	1

*	Yes	Pathogenic	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	2
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	2
.	No	Benign	
*	Yes	Benign	
:	No but simi	Benign	2
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Pathogenic	
*	Yes	Benign	1
*	Yes	Benign	2
.	No	Benign	
*	Yes	Benign	
*	Yes	Benign	1
:	No but simi	Benign	1
*	Yes	Benign	1
*	Yes	Pathogenic	1
*	Yes	Pathogenic	1
*	Yes	Benign	
*	Yes	Benign	
	No	Benign	
*	Yes	Benign	4
*	Yes	Benign	
*	Yes	Benign	2
*	Yes	Benign	1
*	Yes	Benign	2
*	Yes	Pathogenic	1
*	Yes	Benign	
	No	Benign	2
*	Yes	Benign	2
*	Yes	Pathogenic	
*	Yes	Benign	1
:	No but simi	Benign	1
*	Yes	Benign	1

[illegible]

:	No but simi	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	3
*	Yes	Benign	2
:	No but simi	Benign	
	No	Benign	1
:	No but simi	Benign	1
*	Yes	Benign	
*	Yes	Pathogenic	2
		Pathogenic	
*	Yes	Benign	
	No	Benign	5
*	Yes	Benign	1
*	Yes	Benign	2
*	Yes	Benign	1
*	Yes	Benign	
		Pathogenic	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	
	No	Benign	1
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	5
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Pathogenic	
*	Yes	Benign	3
:	No but simi	Benign	1
*	Yes	Benign	1
:	No but simi	Benign	
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	1

*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	3
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	2
*	Yes	Benign	3
*	Yes	Benign	3
*	Yes	Benign	1
*	Yes	Pathogenic	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	3
:	No but simi	Benign	2
*	Yes	Benign	1
*	Yes	Benign	3
*	Yes	Benign	1
*	Yes	Benign	1
:	No but simi	Benign	
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	2
*	Yes	Benign	2
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Pathogenic	
*	Yes	Pathogenic	1
*	Yes	Pathogenic	5
*	Yes	Benign	3
*	Yes	Benign	5
*	Yes	Pathogenic	2
*	Yes	Benign	
*	Yes	Benign	

*	Yes	Benign	1
*	Yes	Benign	2
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	3
*	Yes	Benign	
*	Yes	Pathogenic	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
:	No but simi	Benign	
*	Yes	Benign	
*	Yes	Benign	2
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Pathogenic	
*	Yes	Benign	
*	Yes	Benign	
:	No but simi	Benign	5
:	No but simi	Pathogenic	1
*	Yes	Benign	1
*	Yes	Benign	1
		Pathogenic	1
*	Yes	Pathogenic	1
*	Yes	Benign	3
*	Yes	Benign	1
*	Yes	Pathogenic	1
*	Yes	Benign	
*	Yes	Benign	
:	No but simi	Benign	
	No	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	4
*	Yes	Benign	2
*	Yes	Benign	
*	Yes	Benign	1
:	No but simi	Benign	1

*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Pathogenic	1
*	Yes	Benign	2
*	Yes	Benign	1
		Pathogenic	1
*	Yes	Benign	1
*	Yes	Pathogenic	
	No	Benign	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Pathogenic	
*	Yes	Pathogenic	1
*	Yes	Benign	
*	Yes	Pathogenic	2
	No	Benign	3
	No	Benign	1
*	Yes	Benign	1
*	Yes	Benign	4
*	Yes	Pathogenic	2
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	2
*	Yes	Benign	
*	Yes	Benign	5
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	3
	No	Benign	2
*	Yes	Benign	
*	Yes	Benign	2
*	Yes	Benign	
:	No but simi	Benign	
:	No but simi	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	3
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1

*	Yes	Pathogenic	
*	Yes	Benign	
*	Yes	Pathogenic	1
*	Yes	Pathogenic	1
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	2
*	Yes	Pathogenic	2
*	Yes	Pathogenic	
*	Yes	Benign	2
*	Yes	Benign	1
*	Yes	Pathogenic	
*	Yes	Benign	
*	Yes	Benign	2
*	Yes	Benign	
	No	Benign	1
*	Yes	Benign	1
	No	Benign	1
*	Yes	Benign	4
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	1
	No	Benign	
	No	Benign	2
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Pathogenic	
*	Yes	Benign	1
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*	Yes	Benign	
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*	Yes	Benign	1
*	Yes	Pathogenic	
*	Yes	Benign	
*	Yes	Benign	1

*	Yes	Benign	
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*	Yes	Benign	1
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*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Pathogenic	
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	3
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	3
	No	Benign	3
*	Yes	Pathogenic	1
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	2
*	Yes	Benign	4
		Pathogenic	
*	Yes	Benign	1
*	Yes	Benign	1
:	No but simi	Benign	1
:	No but simi	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	
:	No but simi	Benign	1
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	

*	Yes	Benign	
:	No but simi	Benign	
:	No but simi	Benign	4
:	No but simi	Benign	1
*	Yes	Low confidence	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
:	No but simi	Benign	1
*	Yes	Pathogenic	
*	Yes	Benign	
:	No but simi	Benign	5
*	Yes	Benign	
*	Yes	Benign	3
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Pathogenic	1
*	Yes	Benign	2
*	Yes	Pathogenic	1
	No	Benign	2
*	Yes	Pathogenic	3
*	Yes	Benign	3
*	Yes	Benign	
:	No but simi	Benign	2
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	3
	No	Benign	
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	3
*	Yes	Benign	1
*	Yes	Benign	3

*	Yes	Benign		2
*	Yes	Benign		
*	Yes	Benign		1
*	Yes	Benign		1
*	Yes	Benign		1
*	Yes	Benign		4
*	Yes	Benign		
*	Yes	Benign		
*	Yes	Pathogenic		
*	Yes	Benign		
*	Yes	Benign		1
		Pathogenic		
*	Yes	Benign		
*	Yes	Benign		
*	Yes	Benign		1
*	Yes	Benign		
*	Yes	Pathogenic		1
*	Yes	Benign		1
*	Yes	Benign		1
*	Yes	Benign		
	No	Benign		
	No	Benign		
	No	Benign		
:	No but simi	Benign		3
	No	Benign		
*	Yes	Pathogenic		
*	Yes	Benign	Score = 5	5
	No	Benign		1
	No	Benign		
*	Yes	Benign		1
*	Yes	Benign		3
:	No but simi	Benign		2
	No	Benign		1
*	Yes	Pathogenic		1
*	Yes	Benign		1
*	Yes	Benign		
*	Yes	Benign		
*	Yes	Pathogenic		
*	Yes	Benign		1
*	Yes	Benign		
*	Yes	Benign		
*	Yes	Benign		
*	Yes	Benign		1
*	Yes	Benign		

*	Yes	Benign	
*	Yes	Pathogenic	
*	Yes	Benign	2
	No	Benign	
*	Yes	Benign	1
	No	Benign	1
	No	Benign	
*	Yes	Benign	1
*	Yes	Benign	2
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	1
:	No but simi	Benign	1
:	No but simi	Benign	
:	No but simi	Benign	3
:	No but simi	Benign	1
*	Yes	Pathogenic	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	2
*	Yes	Pathogenic	1
.	No	Benign	1
*	Yes	Pathogenic	1
*	Yes	Pathogenic	2
:	No but simi	Benign	1
:	No but simi	Benign	
:	No but simi	Benign	
	No	Benign	2
*	Yes	Pathogenic	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	5
:	No but simi	Benign	2
:	No but simi	Benign	1
:	No but simi	Benign	
:	No but simi	Benign	1
*	Yes	Pathogenic	1
	No	Benign	
*	Yes	Pathogenic	1
:	No but simi	Benign	2
:	No but simi	Benign	1
*	Yes	Benign	
*	Yes	Benign	

*	Yes	Benign	2
*	Yes	Pathogenic	1
	No	Benign	2
	No	Benign	1
	No	Benign	
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Pathogenic	
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	2
*	Yes	Benign	
*	Yes	Benign	
:	No but simi	Benign	
:	No but simi	Benign	4
:	No but simi	Benign	3
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Pathogenic	
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	1
	No	Benign	1
*	Yes	Benign	
:	No but simi	Benign	
*	Yes	Benign	2
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Pathogenic	3
*	Yes	Benign	1
:	No but simi	Benign	
*	Yes	Benign	
:	No but simi	Benign	1
:	No but simi	Benign	
:	No but simi	Benign	1
*	Yes	Benign	1
*	Yes	Benign	
:	No but simi	Benign	3
*	Yes	Benign	

*	Yes	Benign	1
*	Yes	Benign	1
:	No but simi	Benign	2
*	Yes	Benign	2
*	Yes	Benign	
.	No	Benign	1
.	No	Benign	1
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Pathogenic	
*	Yes	Benign	2
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
:	No but simi	Benign	2
*	Yes	Benign	
*	Yes	Pathogenic	
*	Yes	Pathogenic	
*	Yes	Pathogenic	
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Pathogenic	2
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Pathogenic	
*	Yes	Benign	1
*	Yes	Pathogenic	
*	Yes	Benign	
*	Yes	Benign	2
*	Yes	Benign	
*	Yes	Benign	
	No	Benign	
*	Yes	Benign	5
:	No but simi	Benign	3
*	Yes	Benign	2
*	Yes	Pathogenic	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Pathogenic	1
*	Yes	Benign	3
*	Yes	Benign	
		Pathogenic	1

*	Yes	Benign	1
*	Yes	Pathogenic	
*	Yes	Benign	1
*	Yes	Benign	
	No	Benign	
*	Yes	Benign	2
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Pathogenic	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Pathogenic	
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	5
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	2
*	Yes	Pathogenic	3
*	Yes	Benign	
*	Yes	Pathogenic	2
*	Yes	Benign	
*	Yes	Benign	2
*	Yes	Pathogenic	
*	Yes	Pathogenic	1
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Pathogenic	1
*	Yes	Benign	1
*	Yes	Pathogenic	1
	No	Benign	1
*	Yes	Benign	
*	Yes	Benign	3
	No	Benign	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	2
*	Yes	Benign	5
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	2

*	Yes	Pathogenic	4
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	
:	No but simi	Benign	
:	No but simi	Benign	1
	No	Benign	
	No	Benign	1
*	Yes	Benign	2
*	Yes	Benign	1
.	No	Benign	5
	No	Benign	
	No	Benign	
	No	Benign	
*	Yes	Benign	
	No	Benign	1
	No	Benign	1
	No	Benign	
*	Yes	Benign	3
*	Yes	Benign	1
	No	Benign	1
*	Yes	Benign	
*	Yes	Benign	
	No	Benign	1
	No	Benign	2
		Benign	1
*	Yes	Benign	1
	No	Benign	3
	No	Benign	1
	No	Benign	1
	No	Benign	
*	Yes	Pathogenic	1
*	Yes	Benign	1
*	Yes	Benign	
	No	Benign	
	No	Benign	
	No	Benign	1
	No	Benign	
*	Yes	Benign	2
*	Yes	Benign	
.	No	Benign	
:	No but simi	Benign	
*	Yes	Benign	
*	Yes	Benign	

*	Yes	Benign	
*	Yes	Pathogenic	1
*	Yes	Benign	1
*	Yes	Benign	4
	No	Benign	1
*	Yes	Pathogenic	1
*	Yes	Benign	5
	No	Benign	1
		Pathogenic	
:	No but simi	Benign	
:	No but simi	Benign	
:	No but simi	Benign	
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Pathogenic	1
*	Yes	Benign	4
*	Yes	Pathogenic	1
*	Yes	Pathogenic	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Pathogenic	
*	Yes	Benign	2
*	Yes	Benign	
*	Yes	Benign	
:	No but simi	Benign	1
:	No but simi	Benign	
:	No but simi	Benign	2
:	No but simi	Benign	1
:	No but simi	Benign	1
:	No but simi	Benign	1
	No	Benign	
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	4
*	Yes	Benign	1
*	Yes	Benign	1
:	No but simi	Benign	2
*	Yes	Pathogenic	
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Pathogenic	3
*	Yes	Pathogenic	2
:	No but simi	Benign	
*	Yes	Pathogenic	1

*	Yes	Benign	
:	No but simi	Benign	1
*	Yes	Pathogenic	2
*	Yes	Benign	2
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	2
*	Yes	Benign	
*	Yes	Benign	3
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Pathogenic	1
*	Yes	Benign	2
*	Yes	Pathogenic	1
*	Yes	Pathogenic	
*	Yes	Benign	
*	Yes	Pathogenic	3
*	Yes	Pathogenic	2
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Pathogenic	1
*	Yes	Pathogenic	
*	Yes	Benign	1
*	Yes	Pathogenic	
*	Yes	Pathogenic	3
*	Yes	Benign	
*	Yes	Pathogenic	1
*	Yes	Benign	
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Pathogenic	1
*	Yes	Pathogenic	1
*	Yes	Benign	1
*	Yes	Benign	3
*	Yes	Pathogenic	
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Pathogenic	

*	Yes	Benign	1
*	Yes	Pathogenic	3
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Pathogenic	1
*	Yes	Pathogenic	
*	Yes	Pathogenic	1
*	Yes	Benign	1
:	No but simi	Benign	1
:	No but simi	Benign	1
:	No but simi	Benign	
*	Yes	Benign	3
*	Yes	Pathogenic	1
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	2
*	Yes	Pathogenic	1
*	Yes	Benign	
*	Yes	Benign	
*	Yes	Pathogenic	1
*	Yes	Pathogenic	1
*	Yes	Benign	
*	Yes	Pathogenic	1
.	No	Benign	1
*	Yes	Benign	
		Pathogenic	
*	Yes	Benign	4
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	1
*	Yes	Benign	
*	Yes	Benign	3
*	Yes	Benign	1
*	Yes	Benign	1
.	No	Benign	3
.	No	Benign	
.	No	Benign	1
*	Yes	Benign	3
*	Yes	Pathogenic	1
*	Yes	Benign	1
*	Yes	Benign	1
:	No but simi	Benign	1
*	Yes	Pathogenic	1
*	Yes	Benign	

*	Yes	Benign		1
*	Yes	Benign		1
*	Yes	Pathogenic		
*	Yes	Pathogenic		
*	Yes	Benign		1
*	Yes	Benign		
*	Yes	Benign		
*	Yes	Benign		
*	Yes	Pathogenic		1
*	Yes	Pathogenic		1
*	Yes	Pathogenic		
*	Yes	Benign	Poor quality	1
*	Yes	Benign		1
*	Yes	Pathogenic		1
*	Yes	Pathogenic		
*	Yes	Benign		4
*	Yes	Benign		
*	Yes	Benign		1
*	Yes	Benign		4
*	Yes	Benign		1
	No	Benign		
	No	Benign		
.	No	Benign		1
*	Yes	Benign		1
.	No	Benign		4
*	Yes	Benign		
	No	Benign		2
.	No	Benign		
:	No but simi	Benign		5
:	No but simi	Benign		
	No	Benign		
	No	Benign		
	No	Benign		
.	No	Benign		3
*	Yes	Benign		2
*	Yes	Benign		1
	No	Benign		2
*	Yes	Benign		1

112 variants in 148 people

ClinVar Clinical Significance	ClinVar (allele count)	ClinVar Variat	CADD_phred
VUS		873484	32
			31
			32
VUS		1331990	31
			32
			31
			32
			32
			31
VUS		549328	31
			28.5
			28.8
Pathogenic/LP	1	200063	31
			31
VUS		2431523	29.8
			31
			31
			31
VUS		1372322	28.7
			32
VUS		660076	32
VUS		500066	31
VUS		200039	29.6
Confl (Likely pathogenic(1); VUS	1	263872	27.3
Confl (Likely pathogenic(1); VUS	1	979123	25.8
			31
VUS		660460	28.3
Likely pathogenic	1	527151	28.9
			28.6
			29.4
Pathogenic	1	1073880	29.9
			24.8
			27.4
			32
VUS		1512654	29.2
			32
			33
VUS		519791	32
			28.5
VUS		926652	29.3
Likely pathogenic	1	617870	24.4
			28.8

		26
VUS	919100	24.1
VUS	1935813	22.6
		22.5
		21.4
Confl (VUS 1); LB(1))	495660	22.4
		25.1
		22.1
		25.5
VUS	1386962	25.5
VUS	200136	22.3
		22.4
VUS	228689	20.4
LB	513328	21.3
VUS	1172081	21.7
VUS	922383	23.8
		14.89
VUS	924542	24.7
LB	2203217	22.5
		21.8
VUS	1019484	24.3
		26.7
LB	1378991	20.5
		26.1
VUS	918186	20.8
VUS	161236	22.1
		22.3
		20.5
		22
VUS	200132	23.6
		21
Confl (VUS 9); LB(1))	571314	21.7
		19.15
		22.1
VUS	659714	23.3
		22.5
Benign	263832	23.3
		19.21
VUS	659948	18.56
		21.6
		26.6
Confl (VUS 1); Benign(1))	406302	23.5
VUS	519775	23.3

P/LP	10	16439	47
Benign		654730	18.21
Confl (VUS 3); Benign(1); LB(1))		36129	9.128
VUS		979121	22.8
			16.37
Confl (VUS 6); Benign(1))		406312	21.3
VUS		549458	24.3
			22.1
Confl (VUS 1); LB(1))		925865	11.2
VUS		1001645	25
			23.7
VUS		632818	22.4
VUS		1002178	16.4
			17.55
			23.5
VUS		457269	21.2
VUS		520239	11.85
			8.306
Confl (VUS 5); LB(1))		36126	0.033
VUS		42440	0.03
			11.57
			14.01
			14.45
			14.28
			16.43
			15.77
VUS		924953	16.91
VUS		200202	14.71
Confl (VUS 3); LB(1))		264033	32
Confl (VUS 1); Benign(6); LB(4))		199954	20.9
			28.4
			26.2
VUS		498253	24.6
Confl (VUS 2); LB(1))		237107	23.4
Confl (VUS 4); LB(18))		16445	23.6
			26.9
Confl (VUS 4); LB(10))		237106	26.7
			23
VUS		495659	25.1
			23.2
			23.7
VUS		847326	26.6
Confl (VUS 1); LB(2))		919600	22.9

VUS			11.73
VUS		527167	21.4
VUS		1761971	22
			17.54
LB		2150578	18.13
			24.8
Confl (VUS 2); LB(1))		161240	23.4
VUS		263562	21.4
			25.6
Confl (VUS 7); Benign(5); LB(2))		42439	26.3
LB		922436	23.4
			25.9
			25.1
			22.9
Confl (Likely pathogenic(1); VUS	1	527153	31
Confl (VUS 4); LB(1))		418202	23.9
Confl (VUS 2); LB(1))		918552	22.8
Confl (Likely pathogenic(1); VUS	9	36124	23.2
Confl (Likely pathogenic(1); VUS	1	200124	23.7
			29.9
VUS		1172377	31
LB		2118006	27.6
Confl (VUS 1); LB(4))		198345	18.62
			22.3
VUS		263693	22.9
			26.6
			29.6
			23
Benign/LB		549440	14.39
			22.9
			18.3
			25.8
			31
VUS		1391752	25.1
Confl (VUS 9); LB(2))		42434	32
Confl (VUS 2); LB(1))		406273	6.784
Confl (VUS 2); Benign(6); LB(2))		161237	14.84
VUS		1301311	21.8
Confl (VUS 1); LB(1))		1342380	17.43
VUS		2139396	24.7
VUS		495652	26.1
VUS		922215	26.2
			31

P/LP	4	163462	23.5
			31
			31
VUS		1982904	26.1
VUS		927828	32
VUS		161238	22.9
VUS		922931	26.5
VUS		656559	20.7
			28.6
			26.3
Confl (VUS 3); LB(9))		316364	25.5
			31
VUS		161241	32
			26.4
			24.9
Confl (VUS 4); LB(1))		200116	18.25
			28
			24.9
			32
VUS		918500	24.8
			24.4
Confl (VUS 3); LB(1))		495649	28
			25.2
VUS		200114	24.8
VUS		1804563	24.9
Confl (VUS 3); Benign(4); LB(4))		457262	21.6
VUS		457261	25.9
VUS		1171975	28.8
VUS		495646	24.2
			24.3
VUS		632816	26.5
			24.7
			29.2
			24.8
VUS		921486	24.2
VUS		923954	25.1
VUS		628178	22.3
			27.9
VUS		200113	28.9
			25.9
			24
Confl (Likely pathogenic(1); VUS	1	654126	31
Confl (Pathogenic(1); VUS(4))	7	36115	29.2

			23.1
Confl (VUS 5); Benign(1))		457260	23.7
			31
			27.4
Confl (Likely pathogenic(2); VUS	1	495645	24.3
Confl (Likely pathogenic(1); VUS	20	161239	28.2
VUS		849304	26.9
			24
			24.1
			22.8
			22.7
Confl (VUS 4); LB(4))		42425	17.28
VUS			19.44
			19.48
			21.2
Confl (VUS 1); LB(1))		1722332	21.5
			28.1
			24.2
			19.89
			23.3
VUS		1307927	23.5
			13.79
Confl (VUS 1); LB(1))		924255	16.89
			14.64
			24.8
Confl (VUS 10); Benign(1))		161234	22.3
Confl (VUS 2); LB(1))		1502613	22.6
VUS		921500	24.4
VUS		927327	23
			24.7
			23
Confl (VUS 3); LB(1))		573316	23.6
Confl (VUS 2); LB(2))		547344	23.3
LB		1415876	22.3
			23.1
VUS		922761	23.8
VUS		1332488	24.1
VUS		633209	32
VUS		921089	23.8
LB		2079046	20.8
			28.8
			22.9
			22.8
			22.5

			26.9
			23.1
VUS		492831	26.1
VUS		648865	22.9
			23.6
VUS		42418	24.7
			28.1
Confl (VUS 3); Benign(1); LB(4))		36111	23.5
			23.5
Confl (VUS 10); LB(1))		886456	22.9
			26.2
LB		2004199	24
Confl (VUS 6); Benign(1); LB(1))		200102	21.4
VUS		636975	17.46
Confl (VUS 1); LB(1))		200101	21
VUS		519771	19.46
			23.3
VUS		1305658	20.8
			24.2
VUS		928188	23.8
Benign		2140922	19.32
			26.2
			26.2
Benign/LB		316365	8.15
Pathogenic	1	523797	44
Confl (Likely pathogenic(1); VUS(3); Benign(1))		36109	17.45
			19.07
			27.4
			26.8
Confl (VUS 2); Benign(1); LB(1))		200197	15.73
VUS		200097	26.3
			24.1
			20.1
Confl (Likely pathogenic(1); VUS	8	632817	27.1
VUS		2024034	26.4
Confl (VUS 3); LB(1))		626586	24
			24
Confl (VUS 1); LB(1))		926243	28.8
			25.2
			17.82
Confl (VUS 5); LB(2))		457253	25.9
Confl (Pathogenic(1); VUS(1))	4	549371	27.6
			22.2

Confl (VUS 1); LB(1))		843495	31
Confl (VUS 2); LB(5))		380285	24.7
Benign/LB		36108	26
Confl (VUS 3); Benign(1); LB(2))		450683	20.5
			22.7
			19.32
			28.4
			23.9
			31
VUS		570431	21.5
VUS		1709063	28.8
VUS		1522145	23.8
VUS		1406445	22.1
VUS		633210	28.6
			29.3
VUS		1004390	26.2
VUS		925197	24.3
Confl (Likely pathogenic(1); VUS	3	384344	28.2
			33
			24.6
VUS		1485240	25.5
Confl (VUS 3); Benign(3); LB(11))		36104	15.6
VUS		1171404	25.4
			26.7
			23.9
			22.9
VUS		549357	32
			31
VUS		837738	27.2
			29.3
VUS		457248	21
VUS		643925	26.7
			32
VUS		807242	26.9
VUS			25.3
VUS		575545	31
			29.7
			32
Confl (VUS 11); Benign(1); LB(1))		255306	22.8
VUS		928686	23
			29.9
VUS		519782	24.5
VUS		857010	29.2
VUS		495637	22.7

			14.24
			22
			18.89
VUS		549345	28
			29
VUS		527149	32
Confl (Likely pathogenic(1); VUS	1	1753578	32
Confl (Pathogenic(1); Likely patl	2	200084	33
VUS		629673	19.67
			28.1
VUS		200082	23.1
			22.4
VUS		1061380	26.4
			15.73
			24
			23.6
Confl (VUS 2); Benign(1))		927129	22.7
VUS		924256	17.92
			25.2
VUS		629518	28.2
			23.5
			23.6
			24
VUS		1008866	24.5
Benign/LB		264000	22.7
			23.1
			22.8
VUS		921147	24.3
			22.1
Confl (VUS 5); LB(1))		439707	16.24
VUS		1691560	23.4
			23.5
VUS			21.1
Confl (VUS 2); LB(1))		724608	21.9
			21.9
VUS		316369	22.5
			22.3
			20.7
Benign/LB		36097	22.9
			26.1
Confl (VUS 1); LB(2))		623870	27.1
Confl (VUS 2); LB(5))		200073	22.6
VUS		289267	23.4
VUS		1332122	28.4

Confl (VUS 4); LB(1))	200190	26.5
		29
VUS	1420686	27.9
VUS	579213	32
Confl (VUS 2); LB(1))	921917	29.2
		23.3
VUS	1388574	22.1
		23.2
Confl (VUS 4); LB(1))	264487	24
		22.4
VUS	1172082	27.3
Confl (VUS 2); LB(1))	925249	22.1
Confl (VUS 2); LB(1))	834675	17.06
		18.84
		27.5
		24.2
		22.8
VUS	263883	
VUS	1372341	23.2
VUS	549302	24.5
VUS	1345383	25.9
VUS	1511415	23.1
VUS	926906	23.3
		22.9
		14.52
VUS	922756	25.4
Confl (VUS 1); LB(1))	1485981	24.4
		27.3
VUS	925107	24.9
		24.3
		26.5
		24.1
		22.7
VUS	915613	23.3
		21.6
		22.6
VUS	1171861	23.3
		21.6
		22.5
VUS	566202	24.7
VUS	527180	21.6
		25.4
VUS	928372	23.7

VUS		918768	22.2
VUS		925188	22.9
Confl (VUS 1); LB(1))		926451	18.79
VUS		919716	23.5
VUS		406289	23.1
VUS		429562	24
			22.2
VUS		1507924	31
VUS		919776	32
			23.8
			25.5
			23.6
Confl (Likely pathogenic(2); VUS	4	519783	29.6
VUS		502437	23.7
VUS		923648	23.8
VUS		402848	26.6
Confl (Likely pathogenic(1); VUS	1	373743	32
			25.1
			22.5
LB		947613	23.7
			25.3
VUS		925058	29.6
VUS		918773	29.2
VUS		927991	23.6
VUS		200064	25.3
Confl (VUS 1); LB(1))		527197	22.8
VUS		1314852	24.8
VUS		265142	20.6
			25.4
			25.1
			24.2
			27.8
VUS		923469	23.5
VUS		918678	32
			23
			25.6
			27.7
			33
			29.8
			26.6
VUS		374032	24.8
VUS		1978928	32
			24
VUS		1172298	31

Confl (VUS 4); LB(2))		237096	25.1
VUS		549262	28.2
Confl (Likely pathogenic(1); VUS	1	926028	27.7
			25.4
VUS		1677646	29.5
			23.9
			31
			29.4
			15.68
Confl (VUS 3); LB(1))		406339	17.3
VUS		495615	25.5
			24.3
			22.7
			24.5
VUS		519715	32
VUS			22.4
			25.1
Confl (VUS 2); Benign(1))		979122	22.5
VUS		923488	28.3
			27.9
			27.1
Confl (VUS 3); LB(1))		915615	23.8
VUS		928232	32
			15.59
VUS		924932	22.6
			22.3
Confl (VUS 1); LB(1))		1055113	25.5
VUS		923819	27.2
VUS		406285	29.5
Confl (VUS 5); LB(3))		42370	27.7
VUS		200055	25.6
VUS		1699724	23.1
Confl (VUS 8); LB(1))		200054	21.3
VUS		927888	32
			23.7
			22.8
			19.5
			24.5
Confl (VUS 6); LB(11))		42367	19.25
			22.1
			22.9
VUS		925754	32
			19.29

			23.6
VUS		926574	21.9
			26.7
VUS		926280	32
VUS		926690	27
			19.49
Pathogenic/Likely pathogenic	1	42365	40
			23.4
VUS		640417	28.7
			17.87
Confl (VUS 4); LB(1))		200047	21.3
			22.5
			24.1
			32
VUS		373256	32
Confl (VUS 4); Benign(1); LB(9))		36074	23.4
VUS		200044	26.5
			15.87
			14.62
			23.1
VUS		922683	27.9
VUS		155793	32
			22.4
VUS		927577	26.2
Confl (Likely pathogenic(1); VUS	1	42359	32
			21.3
VUS		501654	22.5
			17.85
Confl (VUS 2); LB(1))		527144	20.6
VUS		925008	31
VUS		2184029	23.8
Confl (VUS 5); LB(6))		495607	25.3
Confl (VUS 2); Benign(1))		457209	21.8
Confl (VUS 11); LB(1))		155792	24.4
VUS		848754	24.2
VUS		923131	23.6
VUS		426624	22.4
Confl (VUS 1); Benign(7); LB(6))		42356	22.9
VUS		922236	29.7
VUS		626881	32
VUS		920374	24.7
Confl (VUS 11); Benign(5); LB(2))		42355	24.3
			26.2
Likely pathogenic	2	976206	23

			25
			23
VUS	918294		27.6
			26.3
VUS	200041		22.4
			22.5
			25.6
			22.7
			29
Confl (VUS 3); LB(1))	927657		28.4
			26.9
Confl (VUS 5); LB(1))	547319		27.7
VUS	926775		28.6
			28.5
Confl (VUS 2); LB(1))	922913		23.4
Confl (VUS 5); LB(1))	200038		17.51
			18.02
VUS	920777		14.17
			18.62
			17.32
			27.3
			20.2
			22.4
Confl (VUS 1); LB(1))	42348		20.4
			23.4
VUS	519762		12.72
			21.6
VUS	521833		26.5
			23.2
			21.5
			22.4
VUS	549202		20.8
			26.2
			21.7
VUS	849542		15.51
			29.6
VUS	263388		23.5
Confl (VUS 6); LB(1))	42345		18.41
LB	1990912		25.6
			25.2
			19.02
VUS	263875		33
Confl (Likely pathogenic(1); VUS	1 549195		25.6
			24.7

		28.1
Benign/LB	316375	28.8
Benign/LB	200027	31
		23.7
		24.3
		23.3
		29.2
Confl (VUS 2); Benign(1))	255295	24
VUS	626883	23
		22.8
VUS		22.8
Confl (VUS 4); Benign(1))	161235	18.11
VUS	406297	23.4
		24.9
VUS	921344	28.5
		21.5
Confl (VUS 2); Benign (6); LB(1))	316376	24.5
		28.3
		23.2
VUS	2140340	24.5
VUS	200024	27.4
		23.3
VUS	928181	18.52
LB	263789	23
Confl (VUS 1); LB(1))	928219	22.2
Confl (VUS 2); LB(1))	658778	22.4
		24.9
		22.6
VUS	527204	18.14
Confl (VUS 1); LB(1))	1079925	17.73
		20.7
		22.5
VUS	636757	22.4
VUS	928399	21.5
Confl (VUS 2); LB(1))	1172320	22.6
Confl (VUS 1); LB(1))	495597	22.4
VUS	495595	17.93
Confl (VUS 2); Benign(1); LB(1))	222603	23.6
		25.7
VUS	36067	21.2
		22.5
		22
Confl (VUS 3); LB(1))	1004707	18.73

Confl (VUS 5); Benign(1); LB(2))		42338	23.2
Benign		16451	22.9
Confl (VUS 8); LB(1))		263998	22.1
			19.8
Pathogenic/Likely pathogenic	1	200017	34
VUS		546101	22
Confl (VUS 3); Benign(1); LB(2))		255292	22.1
VUS		1060096	26.6
VUS		452521	22.3
Benign		36065	17.84
			14.96
			27.6
Likely pathogenic	1	617874	27
Benign		42334	28
VUS		391621	22
			23.3
Confl (VUS 5); Benign(1))		547308	24.7
Confl (Likely pathogenic(2); VUS	1	928903	27.6
			23.6
VUS		918493	23
VUS		1479942	24.6
			27
Confl (VUS 6); Benign(1))		200016	8.383
VUS		519721	26.5
Confl (Likely pathogenic(1); VUS	5	418195	23
VUS		629616	25.3
Confl (VUS 1); LB(1))		1004610	25.1
			29.9
			14.85
VUS		923663	16.94
			23.7
LB		2149206	26.2
VUS		1730244	26.1
			28.6
			25.7
VUS		1730125	26.6
			27.4
Confl (VUS 2); LB(1))		457191	24.3
VUS		1000255	22
			25
			27.5
Confl (VUS 3); LB(1))		406367	29.7
			26.4
VUS		887213	24

VUS		549144	32
VUS		527185	29.2
VUS		1006686	26.1
			33
VUS		1332044	27.2
VUS		263470	25.3
Confl (Likely pathogenic(1); VUS	4	200014	31
			25.2
			32
			23.6
Confl (Likely pathogenic(1); VUS	5	457190	32
Pathogenic	1	549132	
VUS		569815	21.6
			23.9
VUS		16446	22.3
LB		2154893	15.67
VUS		1332021	26.5
VUS		2076889	24
			20.1
Confl (VUS 3); Benign(7); LB(3))		263632	28.3
Benign/LB		199948	24.1
			22.4
LB		42325	22.6
Confl (VUS 3); Benign(2))		225356	22.6
VUS		1014269	24.7
Confl (Pathogenic(1); Likely patl	1	457186	29.7
Confl (Pathogenic(1); VUS(5))	17	36061	27.9
			16.99
Confl (VUS 1); Benign(1))		921753	22.5
			23
Confl (VUS 2); Benign(1))		200009	22.6
			23.8
			6.946
			27.9
VUS		1332421	29.6
LB		2172253	22.4
Confl (VUS 1); Benign(9); LB(11))		36060	24.1
			24.6
Confl (VUS 6); LB(6))		457184	22.6
VUS		1437282	24.4
Confl (VUS 2); Benign(1); LB(4))		199947	20.4
VUS			23
Confl (VUS 7); LB(1))		195848	23.1
VUS		519704	19.96

Confl (VUS 7); LB(2))		42321	32
Confl (Likely pathogenic(1); VUS	4	200006	32
VUS		1329083	27.6
			17.62
Confl (VUS 1); LB(2))		1038944	0.274
VUS		1515556	24.1
VUS		630592	22.8
			15.36
VUS		661278	14.59
			26.7
VUS		520495	26.4
VUS		449603	28.6
VUS		1329358	21.8
			21.7
Confl (VUS 1); LB(1))		919063	17.21
VUS		457183	24.3
Confl (Likely pathogenic(2); VUS	1	200005	32
			23.3
			16.82
			24.1
			32
			1.893
VUS		920774	26.4
			29.1
			25.3
VUS		628357	22.1
VUS		495580	17.48
Confl (VUS 5); Benign(1))		519754	15.53
VUS		457181	28.4
Benign/LB		629374	28
			29.4
VUS		934513	25.5
Confl (VUS 1); Benign(1); LB(1))		200004	31
VUS		1331752	25.3
Confl (VUS 1); LB(1))		943589	25.3
			24.3
			17.36
			24.9
LB		1352424	16.73
VUS		426218	32
VUS		852682	22.3
			23
			26.7
			32

VUS	918481	18.76
		32
LB	2170695	12.91
LB	2181629	9.429
LB	2132525	11.53
LB	2009690	16.02
VUS	1163974	23.8
VUS	1305278	19.42
VUS	667457	21.1
		27.3
Confl (VUS 3); LB(1))	519804	24.3
Confl (VUS 1); LB(1))	200182	22.1
		15.43
VUS	200181	26.9
		25.4
		14.6
Confl (VUS 6); Benign(1))	406321	18.29
VUS	922855	23.9
VUS	928230	18.91
		31
		26.5
VUS	36052	25
		20.7
		23.6
		20.4
		22.3
		23.2
Confl (VUS 4); LB(1))	199997	22.8
VUS	1723377	18.2
		23
VUS	418193	27.2
VUS	925867	21.5
		26.3
VUS	924771	25
VUS	264139	19.59
VUS	922163	22.5
		23.1
		22.5
Confl (VUS 3); Benign(1))	835249	18.9
		20.4
VUS	925631	20.9
		26.2
VUS	439715	23.1
		23.7

VUS		925725	23.4
VUS		237085	25
			20.7
VUS		42299	24.8
			25
			7.128
			19.89
VUS		199990	27.4
VUS		519803	32
VUS		1185015	25.6
VUS		1404350	29.8
Confl (VUS 4); LB(1))		264197	25.5
Confl (VUS 2); LB(1))		922165	25.4
Confl (VUS 4); LB(1))		519796	21.1
Confl (VUS 3); LB(2))		161242	22.9
			23.8
			19.31
VUS		1194355	23.7
			28.8
VUS		918151	32
VUS		915816	32
			22.7
VUS		1177272	24
VUS		923094	32
Confl (VUS 2); LB(1))		1171112	21.7
VUS		925063	22.5
			25.4
			19.01
			29.5
VUS		922302	24
Confl (VUS 2); Benign(1))		1303684	17.37
			22
Confl (VUS 4); LB(1))		418630	21.1
VUS		924443	22.5
Confl (VUS 4); LB(1))		576493	25.1
VUS		42293	23.8
VUS		419187	27.1
Confl (Likely pathogenic(1); VUS	2	439709	32
VUS		654480	23.9
			22.9
			29.6
Confl (VUS 2); LB(1))		926962	25.2
			17.33

			20.2
VUS		929149	32
			19.25
			24.1
Confl (VUS 2); LB(1))		199976	22
VUS		42291	24.8
VUS		1332389	26.1
			22.7
			31
VUS		573231	23
VUS		519778	16.42
Confl (Likely pathogenic(2); VUS	1	36034	31
Confl (VUS 3); LB(1))		927454	13.13
			22.9
			22.8
VUS		919582	25.3
			28.2
			20.2
VUS		1373700	24.2
Confl (VUS 2); LB(1))		527209	13.42
VUS		928341	32
			27.5
VUS		457164	24.6
			22.5
Confl (VUS 4); LB(1))		228683	29.5
			28
			26.2
			21.7
VUS		926701	23.5
VUS		1519683	24.9
Confl (VUS 4); LB(1))		190266	23.6
VUS		923073	29.9
			13.24
			29.1
			27.9
			23.4
			27.3
			22.9
VUS		1305164	21.8
VUS		1171533	22.5
VUS		629467	25.9
VUS		199968	24.3
			21.9
VUS		2188433	30

VUS	922251	29.9
Benign	228314	21.8
		22.4
		23.1
VUS	928335	24.4
VUS	549013	26.2
VUS	570815	23.7
		22.2
VUS	922395	25
		22.2
Confl (VUS 3); Benign(1); LB(1))	161243	13.63
Benign	2105979	17.22
Confl (VUS 3); LB(1))	519712	24.6
VUS	1769781	27.9
		23.1
Confl (VUS 4); LB(2))	406265	21.9
Confl (VUS 3); LB(1))	199966	22.6
LB	1051880	22.8
Confl (VUS 2); LB(2))	923840	14.93
		11.4
VUS	2140886	10.96
VUS	919540	18.25
Confl (VUS 5); LB(3))	200178	25.4
		21.3
VUS	406350	21.5
		19.61
VUS	1702402	21.4
Confl (VUS 2); LB(1))	451043	18.81
Confl (VUS 1); LB(1))	925101	19.74
Confl (VUS 2); LB(1))	657652	18.42
VUS	836106	28.8
VUS	264435	23.7
		24.4
VUS	527179	10.23
VUS	654549	22
VUS	439699	22.7
VUS	1479188	18.05
Confl (VUS 2); LB(1))	549007	24.1
		17.54
Confl (VUS 3); Benign(1); LB(1))	263638	22.8
VUS	1171253	15.59
VUS	1940155	24
		23.2

			18.44
			29
VUS		919888	21.6
Confl (VUS 2); LB(1))		519753	22.1
Confl (VUS 1); LB(1))		919876	17.6
VUS		1004623	27.3
VUS		576755	29.4
			11.77
			23.3
			23.4
			16.02
VUS		2102252	22.7
			23.5
			32
VUS		1171659	32
Confl (Likely pathogenic(1); VUS	3	548999	32
			28.5
Confl (VUS 6); LB(9))		161244	31
			22.9
			32
VUS		1513116	25.6
Confl (Pathogenic(1); Likely patl	1	982352	33
			20.1
VUS		1172366	22.8
Confl (VUS 1); Benign(9); LB(8))		36133	23.7
LB		549475	12.39
			22.4
VUS		284953	23.1
			23.2
VUS		927728	22.3
			27.7
VUS		1332115	26.2
VUS		925643	31
			27.1
VUS		919884	22.8
			29.4
			29.8
VUS		927796	18.86
			27.7
			27.1
VUS		2159797	28
Confl (VUS 1); Benign(1); LB(1))		547298	19.9
VUS		943539	25.2

Confl (VUS 6); Benign(4); LB(8))		199960	21.9
VUS		1677462	22
VUS		2055260	29.1
Confl (VUS 2); Benign(1); LB(7))		316388	23.6
			20.3
			17.64
VUS		423542	20.5
VUS		942009	21.1
Confl (VUS 1); LB(1))		451847	22.4
			23.3
Confl (Likely pathogenic(1); VUS	1	426283	24.7
VUS		921687	23.6
VUS		199959	24.5
VUS		925903	27
VUS		919909	23.7
VUS		691913	28.2
Confl (Likely pathogenic(1); VUS	2	549428	28.1
			22
VUS		859337	29.5
			28.7
			29.1
			22.7
			29.1
			29.9
VUS		1757628	32
Confl (VUS 1); Benign(1))		2169219	22.5
			27.3
			31
VUS			29.6
VUS		629334	28.2
VUS		457255	20.5
			24.7
VUS		632802	22.9
			25.3
			23.5
			23.5
			29.2
Likely pathogenic	1	36101	30
VUS		546752	23.8
Confl (Likely pathogenic(1); VUS	4	561296	24.7
			25.4
			27.6
VUS		573035	22.3
			27.9

			24.9
VUS		968721	26.3
VUS		836146	25.2
VUS		926473	22.4
			24.4
			24.7
VUS		923800	25.6
			21.9
VUS		1749324	22.4
			12.55
			22.2
			24.6
			28
			22.1
			24.7
Likely pathogenic	4	807252	32
			25.1
Confl (Likely pathogenic(1); VUS	1	36083	26.4
VUS		928043	24.1
			19.29
VUS		449605	26
VUS		519790	26.4
VUS		1997975	29
VUS		1306834	19.95
VUS		1332450	29.1
Likely pathogenic	1	546550	34
VUS		495610	32
VUS		1473835	23.7
LB		1953627	22.4
			23.2
			25.5
VUS		402851	24
VUS		628674	29.9
VUS		926806	31
Confl (VUS 1); LB(1))		922919	12.48
VUS		925148	22.3
			23
Confl (VUS 3); LB(1))		200144	21.4
VUS		923237	23.6
VUS		519698	24.8
			16.01
VUS			22.4
			29.6
VUS		2075634	26.5

VUS		925755	29.5
			18.99
			32
			32
			24.6
VUS		316393	23.6
			26
Confl (Pathogenic(1); Likely patl	1	547296	24.8
Confl (Pathogenic(1); VUS(7); LI	15	42296	25.7
			29.1
			32
VUS		1171650	29.4
Confl (VUS 1); Benign(1))		920884	24.1
			24.4
			29.9
VUS		662622	28.4
VUS		200029	24.5
VUS		858546	24.3
VUS		1313725	23.6
Confl (VUS 6); LB(1))		406316	25.2
			25.1
			22.3
			19.36
Confl (VUS 2); Benign(5); LB(1))		884752	21
VUS		495661	21.7
Confl (VUS 5); LB(1))		36130	18.06
Benign/LB		163486	14.01
Confl (VUS 1); Benign(1))		922799	23.2
VUS		1056518	20.8
Confl (VUS 2); LB(1))		921512	23.4
			18.82
VUS		161245	22.7
			23
			22.8
Confl (VUS 2); Benign(4); LB(2))		885690	25.7
			23.4
			23.5
VUS		924062	23
Confl (VUS 2); LB(1))		628807	22.6

52 variants in 168 people

REVEL_score	REVEL allele count	LOVD	LOVD (allele count)
0.95		1	
0.988		1	
0.975		1	
0.957		1	
0.937		1	
0.942		2	
0.962		1	
0.933		1	
0.96		1	
0.949		15	
0.957		1	
0.939		2	
0.961		1 Likely pathogenic	1
0.97		1	
0.974		1	
0.964		3	
0.975		1	
0.947		1	
0.948		1	
0.948		1	
0.953		3	
0.962		1	
0.941		1	
0.95		1 Likely pathogenic	1
0.941		1	
0.943		1	
0.982		1	
0.969		1	
0.938		1	
0.967		1	
0.944		1	
0.961		3	
0.98		1	
0.968		1	
0.941		1	
0.963		2	
0.975		1	
0.975		12 VUS	
0.961		1	
0.949		1	
0.937		1	
0.965		1	

0.749		
0.399		
0.404		
0.404		
0.174		
0.167		
0.371		
0.354		
0.816	Likely pathogenic	1
0.684		
0.354		
0.427		
0.306		
0.191		
0.42		
0.57	VUS	
0.193		
0.559		
0.514		
0.268		
0.605		
0.79		
0.224		
0.535		
0.251		
0.522		
0.243		
0.333		
.		
0.516		
0.412		
0.223		
0.337		
0.684		
0.351		
0.745		
0.475		
0.356		
0.449		
0.242		
0.361		
0.671		
0.433		
0.705	Pathogenic, pathogenic	2

0.211

0.164

0.326

0.168

0.427

0.681

0.218

0.114

0.576

0.564

0.552

0.141

0.165

0.454

0.288

0.137

0.184

0.123

0.191

0.144

0.192

0.291

0.232

0.414

0.32

0.329

0.296

0.632

Likely benign

0.241

0.782

0.764

0.539

0.394

0.569

Likely benign, VUS

0.589

0.559

Likely benign

0.258

0.488

0.376

0.679

0.684

0.462

0.177
0.112
0.122
0.186
0.094
0.526
0.422
0.279
0.581
0.678
0.373
0.706
0.753
0.396
0.803
0.665
0.515
0.454
0.861
0.869
0.648
0.666
0.326
0.315
0.555
0.625
0.785
0.386
0.252
0.54
0.332

Likely pathogenic

1

0.739
0.922
0.777
0.867
0.554
0.521
0.429
0.417
0.543
0.377
0.65
0.735

VUS

0.642	
0.622	
0.837	
0.742	
0.648	
0.465	VUS
0.562	VUS
0.332	
0.842	
0.699	
0.646	
0.668	
0.821	VUS
0.694	
0.707	
0.37	
0.453	
0.534	
0.648	
0.47	
0.593	
0.656	
0.795	
0.674	
0.637	
0.242	
0.777	
0.827	
0.523	
0.775	
0.622	
0.777	
0.809	
0.593	
0.613	
0.726	
0.363	
.	
0.82	
0.622	
0.594	
0.471	
0.709	
0.791	

0.589		
0.392		
0.791		
0.844		
0.802	Likely pathogenic	1
0.71		
0.587		
0.556		
0.369		
0.328		
0.283		
0.379		
0.291		
0.401		
0.188		
0.195		
0.531		
0.367		
0.285		
0.406		
0.756		
0.166		
0.173		
0.218		
0.358		
0.45		
0.493		
0.461		
0.386		
0.469		
0.321		
0.471		
0.244		
0.268		
0.341		
0.301		
0.591		
0.883		
0.28		
0.286		
0.794		
0.355		
0.39		
0.261		

0.667
0.301
0.644
0.331
0.512
0.611
0.828
0.406
0.328
0.486
0.791
0.418
0.359
0.423
0.272
0.437
0.552
0.345
0.569
0.662
0.333

VUS

Likely benign, VUS

0.669

0.397

0.285

0.326

0.899

0.685

0.291

0.714

0.613

0.234

0.562

0.653

0.446

0.737

0.441

0.564

0.353

0.543

0.868

0.529

VUS

0.918		
0.562	Likely benign	
0.535		
0.274		
0.649		
0.309		
0.837		
0.767		
0.743		
0.435		
0.291		
0.297		
0.382		
0.66		
0.724		
0.484		
0.518		
0.701	Likely pathogenic, VUS	3
0.877		
0.733		
0.616		
0.602		
0.619		
0.84		
0.598		
0.627		
0.73	VUS	
0.795		
0.597		
0.779		
0.399		
0.731		
0.672		
0.693		
0.649		
0.703		
0.607		
0.758		
0.357		
0.411		
0.89		
0.686		
0.576		
0.437	VUS	

0.295		
0.414		
0.275		
0.8	Likely pathogenic, VUS	2
0.682		
0.831	Likely pathogenic	1
0.772	VUS	
0.923	Likely pathogenic, VUS	2
0.358		
0.769		
0.436	VUS	
0.425		
0.616		
0.232		
0.665		
0.492		
0.241		
0.281		
0.42		
0.632		
0.676		
0.521		
0.665		
0.497		
0.29		
0.392		
0.372		
0.577		
0.316		
0.372		
0.709		
0.404		
0.335		
0.3		
0.272		
0.402		
0.392		
0.413		
0.4		
0.511		
0.474		
0.283		
0.442		
0.892		

0.41
0.862
0.612
0.443
0.651
0.429
0.296
0.485
0.645
0.471
0.745

0.289
0.146
0.274
0.599
0.608
0.41

0.572
0.608
0.41
0.284
0.492
0.502
0.212
0.73
0.352
0.607
0.579
0.678
0.648
0.519
0.614
0.43
0.377
0.454
0.373
0.451
0.546
0.492
0.759
0.611
0.637

0.472		
0.368		
0.357		
0.562		
0.419		
0.492		
0.274		
0.871		
0.847		
0.763		
0.753		
0.583		
0.78		
0.606		
0.684		
0.719		
0.793	VUS	
0.469		
0.513		
0.444		
0.611		
0.696		
0.578		
0.53		
0.596		
0.489		
0.536		
0.302		
0.514		
0.718		
0.656	Likely benign, VUS	
0.739		
0.409		
0.646	Likely pathogenic (domi	5
0.491		
0.433		
0.733		
0.873		
0.91		
0.785		
0.565		
0.843	VUS	
0.775		
0.726		

0.511
0.654
0.752
0.734
0.807
0.714
0.625
0.911
0.296
0.204
0.575
0.569
0.32
0.672
0.541
0.625
0.747
0.401
0.848
0.763
0.744
0.471
0.602
0.306
0.362

VUS

0.619
0.342
0.62
0.915
0.659
0.562
0.276
0.457
0.858
0.494
0.443
0.346
0.781
0.375
0.222
0.245
0.835
0.366

VUS

Likely benign

VUS

0.306		
0.322		
0.634		
0.839		
0.412		
0.28		
0.664		
0.696		
0.179		
0.381		
0.501		
0.781		
0.834		
0.68	VUS	
0.313		
0.669	VUS	
0.204		
0.241		
0.45		
0.791		
0.772	Likely pathogenic	3
0.367		
0.571		
0.903	VUS	
0.372		
0.423		
0.393		
0.353		
0.772		
0.453		
0.567		
0.276		
0.446		
0.514		
0.606		
0.35		
0.377		
0.525		
0.751		
0.784		
0.754	VUS	
0.877		
0.451		

0.787	
0.414	
0.764	
0.813	
0.625	
0.381	
0.331	
0.317	
0.866	
0.93	
0.878	
0.728	
0.842	
0.897	
0.354	
0.365	
0.29	
0.3	
0.244	
0.258	
0.862	
0.512	
0.646	
0.47	
0.649	
0.209	
0.431	
0.885	
0.612	
0.336	
0.336	
0.32	
0.697	
0.453	
0.123	
0.808	
0.724	VUS
0.303	
0.614	
0.893	
0.336	
0.663	VUS
0.827	
0.56	

0.744		
0.817	Likely benign	
0.889	Likely benign, VUS	
0.38		
0.566		
0.631		
0.733		
0.67	Likely pathogenic	12
0.356		
0.385		
0.436		
0.402		
0.391		
0.59		
0.826		
0.292		
0.567	Likely benign	
0.597		
0.518		
0.392		
0.608		
0.45		
0.337		
0.603		
0.311		
0.55		
0.833		
0.413		
0.287		
0.278		
0.451		
0.439		
.		
0.733		
0.39		
0.383		
0.307		
0.628		
0.407		
0.718		
0.336		
0.264		
0.264		
0.203		

0.396	Likely benign	
0.502		
0.474	Likely benign, VUS	
0.259		
0.802	Likely pathogenic	1
0.519	VUS	
0.502		
0.792		
0.396		
0.465		
0.247		
0.786		
0.843		
0.694	Likely benign, VUS	
0.325		
0.501		
0.546		
0.736		
0.61	Likely pathogenic	2
0.865		
0.853		
0.867		
0.201		
0.771		
0.505	VUS	
0.797		
0.607		
0.752		
0.652		
0.268		
0.644		
0.591		
0.515		
0.678		
0.742	Pathogenic (dominant),	1
0.589		
0.732		
0.469		
0.237		
0.634		
0.524		
0.544	Likely benign	
0.53		
0.403		

0.645		
0.597		
0.483		
0.532		
0.596		
0.598		
0.438	VUS	
0.784		
0.871		
0.356		
0.786		
0.297		
0.627		
0.395		
0.47		
0.694		
0.358		
0.253		
0.786	Likely pathogenic	72
0.311		
0.277		
0.388	Likely benign, VUS	
0.46		
0.625		
0.891		
0.804	VUS	
0.228		
0.365		
0.432		
0.332		
0.45		
0.246		
0.932		
0.722		
0.326		
0.47		
0.786		
0.54		
0.547		
0.623	Likely benign	
0.396		
0.653		
0.341		

0.862		
0.861	Likely pathogenic	4
0.717		
0.267		
0.31		
0.561		
0.508		
0.242		
0.234		
0.772		
0.65		
0.701		
0.344		
0.325		
0.285		
0.402		
0.903	VUS	
0.387		
0.155		
0.414		
0.931		
0.312		
0.815		
0.922		
0.694		
0.454		
0.331		
0.236		
0.876		
0.877		
0.815		
0.663		
0.815	Likely benign	
0.764		
0.678		
0.686		
0.295		
0.874		
0.251		
0.86		
0.142		
0.178		
0.733		
0.509		

0.259	
0.862	
0.269	
0.133	
0.13	
0.241	
0.563	
0.367	
0.652	
0.89	
0.637	
0.527	VUS
0.235	
0.771	
0.728	
0.246	
0.166	
0.314	
0.31	
0.55	
0.6	
0.66	VUS
0.26	
0.354	
0.292	
0.447	
0.302	VUS
0.302	
0.21	
0.396	
0.725	
0.287	
0.64	
0.754	
0.275	
0.351	
0.627	
0.326	
0.259	
0.261	
0.555	
0.591	
0.429	
0.457	

0.707		
0.787	Likely benign, VUS	
0.288		
0.463		
0.676		
0.194		
0.181		
0.635	VUS	
0.656	VUS	
0.527		
0.781		
0.685		
0.659		
0.323		
0.607	Likely benign	
0.675		
0.27		
0.659		
0.85		
0.845		
0.849		
0.556		
0.576		
0.811		
0.581		
0.646		
0.85		
0.471		
0.926		
0.421		
0.138		
0.174		
0.18		
0.224		
0.407		
0.679	VUS	
0.81		
0.93	Likely pathogenic	2
0.813		
0.421		
0.703		
0.472		
0.176		

0.069	
0.847	
0.308	
0.631	
0.191	
0.629	
0.637	Likely benign, VUS
0.462	
0.925	
0.476	
0.298	
0.764	VUS
0.293	
0.593	
0.381	
0.802	
0.841	
0.511	
0.588	
0.195	
0.782	
0.569	
0.731	
0.637	
0.826	Likely benign
0.784	
0.665	
0.636	
0.408	
0.657	
0.294	
0.907	
0.312	
0.725	
0.798	
0.425	
0.788	
0.531	
0.255	
0.428	
0.698	
0.693	VUS
0.262	
0.727	

0.871

0.426

0.627

0.388

0.642

0.454

0.301

0.522

0.289

0.487

0.136

0.325

0.542

0.282

0.279

0.187

0.314

0.13

0.109

0.208

0.21

0.45

Likely benign

0.152

0.203

0.165

0.249

0.262

0.272

0.224

0.433

0.368

0.423

0.186

0.519

0.48

0.331

0.376

0.24

0.344

0.242

0.672

0.409

0.368
0.883
0.237
0.241
0.199
0.789
0.902
0.244

0.474
0.541
0.25

0.404
0.708
0.799
0.754

0.884
0.864

0.863 VUS
0.677

0.907
0.459

0.823 VUS
0.334

0.29

0.473 Benign, Likely benign
0.274

0.518
0.475

0.425
0.328

0.734

0.681 VUS

0.825
0.446

0.338
0.658

0.913
0.322

0.69

0.63

0.921

0.22

0.887

0.372	
0.316	
0.714	
0.618	Likely benign
0.405	
0.311	
0.275	
0.275	
0.359	
0.65	
0.727	VUS
0.534	
0.592	
0.88	
0.443	
0.861	
0.899	
0.392	
0.864	
0.651	
0.574	
0.46	
0.804	
0.77	
0.8	
0.283	
0.672	
0.777	
0.649	
0.715	
0.388	
0.853	
0.453	
0.76	
0.741	
0.741	
0.906	
0.922	Likely pathogenic
0.489	
0.784	
0.556	
0.765	
0.531	
0.859	

0.557
0.899
0.576
0.475
0.75
0.864
0.75
0.28
0.41
0.185
0.243
0.532
0.797
0.313
0.261
0.631
0.535
0.663
0.497
0.622
0.64
0.742
0.524
0.289
0.46

VUS

VUS

0.519
0.327
0.421
0.354
0.309
0.538
0.422
0.529
0.108
0.396
0.171
0.265
0.505
0.367
0.062
0.261
0.42
0.625

Likely benign

0.509		
0.295		
0.669		
0.676		
0.317		
0.278	VUS	
0.238		
0.702	Likely pathogenic	1
0.601		
0.497		
0.579		
0.804		
0.279		
0.213		
0.31		
0.278		
0.343		
0.31		
0.315		
0.396		
0.259		
0.126		
0.103		
0.151		
0.165		
0.06		
0.097		
0.161		
0.083		
0.356		
0.285		
0.366		
0.078		
0.144		
0.408		
0.192		
0.452		
0.119		
0.074		

42 variants in 76 people

21 variants in 119 people

UMD-FBN1 prediction and score	UMD-FBN1 (allele count)	HGMD
-------------------------------	-------------------------	------

		DM
--	--	----

Pathogenic (100)		1 DM
------------------	--	------

Pathogenic (76)		1 DM
-----------------	--	------

Pathogenic (88)		1 DM
-----------------	--	------

		DM
--	--	----

Pathogenic (100)		1 DM
------------------	--	------

		DM
--	--	----

Pathogenic (100)		1 DM
------------------	--	------

		DM?
--	--	-----

		DM
--	--	----

Probable polymorphism (53)

DM?

DM

DM?

Pathogenic (82)

19 DM

DM?

Pathogenic (76)

1

Probable polymorphism (53)

DM?

DM?

DM

Probably pathogenic (65)

11

Pathogenic (94)

191 DM?

Polymorphism (50)

DM?

Probable polymorphism (53)

DM

Probable polymorphism (53)

DM?

DM?

DM?

Probably pathogenic (71)

DM

9 DM

DM

Pathogenic (100)

55 DM?

Polymorphism (41)

DM?

Pathogenic (100)

4 DM

DM

Probably pathogenic (71)

4 DM?

Probably pathogenic (71)

43 DM?

DM?

DM?

Pathogenic (88)

12 DM

Pathogenic (76)

1 DM

DM?

DM?

Probably pathogenic (65)

20 DM?

DM?

Polymorphism (47)

DM?

DM?

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Pathogenic (82) 947 DM?

Pathogenic (99) 3 DM
Probable polymorphism (53) DM

DM
DM

Polymorphism (41) DM?

DM?

DM?

DM?

Polymorphism (47) DM
DM?
DM?

Pathogenic (86)	2 DM
Pathogenic (82)	1 DM DM?
Pathogenic (100)	2 DM

DM?

Probably pathogenic (71)	1 DM
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Polymorphism (41)	DM?
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Pathogenic (88)

2

DM?

Pathogenic (94)

1 DM

DM

DM?

DM?

DM

DM

Probably pathogenic (65)

2 DM

DM

DM?

DM

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Pathogenic (88)

2 DM

Pathogenic (88)

3 DM?

DM?

Probably pathogenic (71)

DM?
8 DM

DM?

Probably pathogenic (71)

34 DM

DM?

Pathogenic 82)

2 DM?

DM?

DM

Polymorphism (47)

DM?

DM

DM

DM?

DM?

Probably pathogenic (71)

57 DM?

Probably pathogenic (71)

1 DM

Pathogenic (94)

31 DM

DM?
DM

DM?

Pathogenic (100)

2 DM

DM?

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DP

Probably pathogenic (71)

12 DM?

DM?

DM

DM

Pathogenic (94)

2 DM

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8499 DM?

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DM

Probably pathogenic (71)

1 DM

Probably pathogenic (71)

129 DM?

Probably pathogenic (71)

5 DM

DM

DM

Probably pathogenic (65)

355 DM?

Polymorphism (29)

DM

Probable polymorphism (59)

DM?
DM

Pathogenic (76)

1 DM

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Pathogenic (82)
Polymorphism (46)

1 DM

Pathogenic (86)

DM
2 DM

Polymorphism (47)

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Pathogenic (76)

20 DM?

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Pathogenic (82)

5 DM

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Pathogenic (76)

1

Polymorphism (35)

DM?

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Pathogenic (100)

52 DM?

DM

Pathogenic (93)

623 DM?

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Probable polymorphism (59)

DM

Pathogenic (88)

1 DM

Probable polymorphism (53)

DM
DM

DM

Pathogenic (82)

DM?
6 DM

DM
DM?

DM

Probably pathogenic (71)

1 DM
DM?

DM?
DP

Probably pathogenic (71)

40 DM?

e

56 variants in 11237 people

HGMD (allele count)	Allele Count African/Africar	Allele Count Latino/Admixe
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	0	0
	0	0
	1	0
	0	0
1	0	0
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	0	0
1	0	0
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[illegible]

95 variants in 629 people

20 variants in 25 people

21 variants in 36 people

[illegible]

[illegible]

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[illegible]

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One variant in 1 person

21 variants in 41 people

9 variants in 13 people

Allele Count European (non Allele Count Other

Allele Count South Asian

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3	0	0
0	0	2
33	0	1
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2	0	1
1	0	0
1	0	0
0	0	0
3	4	4
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0	0	0
0	0	0
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1	0	0
0	0	0
1	0	0
6	0	0
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1	0	0
2	0	1
0	0	0
1	0	0
1	0	0

45	1	2
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1	0	0
4	0	0
1	0	0
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0	0	0
1	0	0
0	0	1
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0	0	0
3	0	0
2	0	0
1	0	0
1	0	3
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0	0	2
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12	0	0
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0	0	0
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0	0	2
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0	0	1
0	1	0
1	0	0
3	0	0
4	1	0
1	0	0

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3	0	0
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1	0	0
2	0	0
0	0	1
1	0	0
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1	0	0
1	0	0
4	1	0
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0	0	0
1	0	0
2	0	0
0	0	0
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1	0	0
9	0	0
3	0	0
4	0	0
2	0	0
0	0	0
0	0	1
1	0	1

3	0	0
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1	0	2
1	0	0
1	0	0
0	0	0
0	0	1
1	0	0
8	1	0
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11	0	0
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9	1	1
1	3	0
0	1	0
1	0	0
0	0	0
1	0	0
37	0	2
0	0	1
1	0	0
0	0	4
0	0	2
0	0	1
2	0	0
3	0	0

95 variants in 123 people 3 variants in 3 people

42 variants in 51 people