

CGT Essential - Variants List

Gene	Tested Variants
<i>MMACHC</i> NM_015506.2	c.1A>G; c.2T>C; c.2T>G; c.3G>A; c.72C>A; c.80A>G; c.81+1G>C; c.81+1G>T; c.81+1G>A; c.81+2T>C; c.81+2T>G; c.81G>A; c.82-1G>A; c.89G>A; c.90G>A; c.158T>C; c.178dupG; c.182G>C; c.187delC; c.202C>T; c.217C>T; c.270dupT; c.271dupA; c.273_276delAGAG; c.276G>A; c.276G>T; c.277-2A>G; c.285dupA; c.292C>T; c.310_313delGACT; c.315C>G; c.328_331delAACC; c.331C>T; c.347T>C; c.352delC; c.364dupC; c.384delC; c.388_390delTAC; c.388T>C; c.389A>G; c.391C>T; c.394C>T; c.398_399delAA; c.415_416delCCinsTA; c.420G>A; c.427C>T; c.429+1G>C; c.430-2A>G; c.433delA; c.434dupT; c.435_436delAT; c.439G>A; c.445_446delTG; c.440G>A; c.440G>C; c.452A>G; c.457C>T; c.464G>A; c.466G>A; c.467G>A; c.471G>A; c.471G>C; c.481C>T; c.482G>A; c.484G>T; c.497dupT; c.500delC; c.507_519delAGAGGTGCCAGAT; c.541_548delGACTGTGT; c.547_548delGT; c.551_554dupTACC; c.565C>A; c.565delC; c.567dupT; c.574delC; c.578T>C; c.600G>A; c.603_604delTG; c.608G>A; c.609G>A; c.615C>A; c.615C>A; c.616C>T; c.617G>A; c.617G>C; c.619dupG; c.626_627delTG; c.626dupT; c.648dupA; c.658_660delAAG; c.666C>A; c.675_679delCTCCA; c.688C>T; c.688C>T.
ACADM NM_001286043.1	c.708A>C; c.419T>C; c.826C>T; c6_6delGCCAACATGGCAinsACCCCGAAGG; c6_6delGCCAACATGGCAinsACCCCGAGTG; c.1012G>T; c.1025dupT; c.1026delC; c.1027G>A; c.1045-2A>C; c.1048C>T; c.1049A>T; c.104T>G; c.1056_1057delAT; c.1058C>A; c.107_113dupGATTTAG; c.1072dupG; c.1076T>C; c.1081A>G; c.1083delG; c.1084A>C; c.1084A>G; c.1098_1110dupTAGAATGAGTTAC; c.1111_1112insTAGAATGAGTTAC; c.1111C>T; c.1141C>T; c.1144C>T; c.1144delC; c.1151C>T; c.1154A>G; c.1172delA; c.118+1G>T; c.1184G>A; c.119-1G>C; c.1201_1204delTTAG; c.1213dupG; c.1223T>C; c.1249G>T; c.127G>A; c.1288dupT; c.1288T>A; c.1289A>C; c.1293+1G>A; c.1294-1G>C; c.1294-2A>T; c.1320_1321delAA; c.157C>T; c.165delT; c.173_174delAG; c.177A>C; c.199T>C; c.1A>G; c.201T>A; c.216+1G>T; c.216+2T>C; c.216+2T>G; c.217-1G>A; c.218A>G; c.224delT; c.233T>C; c.244dupT; c.250C>T; c.253G>T; c.270_271delCA; c.286+2T>G; c.30+2T>C; c.386-1G>C; c.386-2A>G; c.3G>C; c.421_424delATTA; c.432_444delATTGGCTTATGGA; c.442_447delGGATGT; c.446G>A; c.454dupG; c.461C>T; c.47delC; c.486+1delG; c.486+1G>A; c.486+1G>T; c.524delA; c.525delG; c.530_533delAGTA; c.536delT; c.571T>C; c.602A>C; c.602A>G; c.548_551delCTGA; c.553G>T; c.563T>C; c.567+2T>G; c.568-1G>A; c.568-2A>C; c.571T>C; c.602A>C; c.602A>G; c.640_641delGA; c.654T>G; c.676A>G; c.67C>T; c.682G>A; c.797T>C; c.807+1G>A; c.716G>A; c.716G>T; c.782C>A; c.785delC; c.797T>C; c.807+1G>A; c.807+2T>G; c.807G>C; c.808-1G>A; c.808-2A>C; c.808G>T; c.816C>G; c.892T>C; c.833C>T; c.838A>G; c.841A>G; c.856G>A; c.85C>T; c.893_902delGTGACGGAGCinsTTTAA; c.896A>G; c.898G>A; c.916_928delGCAATGGGAGCTT; c.925_927delGCTinsCC; c.941G>C; c.942A>T; c.948+1G>A; c.949-2A>G; c.980G>C; c.981_982delAG.
<i>DHCR7</i> NM_001163817.1	C.941G>C; C:942A>T; C:948+1G>A; C:949-2A>G; C:980G>C; C:981_952delAG. c.862G>A; c.385_412+5delATCCAGGAGGGGGCCGTGACTCCTGCAGGTAGC; c.89G>C; c.1214delA; c.1004delC; c.1054C>T; c.1055G>A; c.1057delG; c.1066delC; c.1076_1077dupAC; c.1080_1081delGT; c.1084C>T; c.1090A>G; c.1112G>A; c.111G>A; c.1138T>C; c.1139G>A; c.1146C>A; c.1190C>T; c.1199G>A; c.1210C>T; c.1219A>T; c.1222T>C; c.1228G>A; c.1290C>G; c.1325A>G; c.1327C>T; c.1328G>A; c.1337G>A; c.1342_1344delGAGinsC; c.1342G>A; c.1348delC; c.1349_1350delGCinsTG; c.1396G>A; c.1409T>A; c.1426T>C; c.151C>T; c.16C>T; c.1A>C; c.1A>G; c.278C>T; c.292C>T; c.296T>C; c.321G>C; c.322-2A>G; c.326T>C; c.355delC; c.356A>T; c.3G>A; c.413-1G>A; c.413-2A>G; c.429T>G; c.433A>C; c.440G>A; c.452G>A; c.453G>A; c.461C>G; c.461C>T; c.470T>C; c.501G>A; c.506C>T; c.546G>A; c.626+1G>T; c.627-1G>A; c.651C>A; c.655T>C; c.655T>G; c.696G>A; c.724C>T; c.725G>A; c.728C>G; c.730G>A; c.740C>T; c.744G>T; c.803delA; c.804delT; c.820_825delAACGTC; c.82C>T; c.831+2T>A; c.832-1G>C; c.839A>G; c.841G>A; c.852C>A; c.858G>A; c.81C>A; c.866C>T; c.870G>A; c.874delC; c.889A>C; c.894C>A; c.894C>A; c.895C>T; c.89delG; c.902A>G; c.906C>G; c.907G>A; c.915C>G; c.934_935delGT; c.939G>A; c.952delT; c.952T>A; c.963+1G>T; c.963+2T>G; c.964-1G>C; c.964-1G>T; c.970T>C; c.976G>T; c.98+2_98+6delTAAGG; c.981C>A; c.99-1G>C; c.991C>T; c.995delT; c.1138T>C; c.1139G>A; c.1146C>A.
НВВ NM_000518.4	<pre>c208G>A; c.179A>C; c.93G>T; c.93-17_93-IdeITATTTTCCCACCCTTAG; c75G>C; c.316-7C>A; c29G>A; c18C>G; c 136C>T; c136C>G; c.121C>T; c137C>A; c137C>G; c137C>T; c138C>T; c140C>T; c150C>T; c 50A>C; c78A>C; c78A>G; c79A>G; c107C>A; c131C>G; c.103G>T; c.107A>G; c.108C>A; c.110C>A; c.110delC; c.111_118deITTGGACCC; c.112deIT; c.113G>A; c.114_120deIGACCCAG; c.114G>A; c.117_118deICC; c.118C>T; c.118deIC; c.111upT; c.123deIG; c.125dupT; c.126_129deICTTT; c.126deIC; c.173deIC; c.158deIT; c.138dupT; c.142dupG; c.132H5dupATCT; c.143dupA; c.145_146inSATCT; c.146deIT; c.147deIG; c.150deIC; c.155deIC; c.158deIA; c.162deIT; c.138dupT; c.143dupATCT; c.143dupA; c.145_146inSATCT; c.146deIT; c.147deIG; c.150deIC; c.155deIC; c.158deIA; c.162deIT; c.163dupG; c.164_168deITTATGinsGGCATCA; c.155_177deITATGGGCAACCCT; c.175duPC; c.178A>T; c.179deIA; c.18_19deITG; c.182T>A; c.184A>T; c.189_195deITCATGGC; c.19_20deIGAinSAT; c.190C>T; c.194deIG; c.190A>G; c.199A>T; c.196A; c.199A>T; c.189_195deITCATGGC; c.19_20deIGAinSAT; c.190C>T; c.194deIG; c.203T>A; c.206_212deITCGGTGC; c.206T>A; c.209deIG; c.20A>T; c.20deIA; c.210deIT; c.216deIT; c.216duPT; c.217_221deIAGTGAinST; c.217dupA; c.219_220deIG; c.219dupT; c.212_224dupATGG; c.226deICT; c.226_20deIGG; c.226S-T; c.230deIC; c.2325deIC; c.235duPC; c.244deIC; c.247A>G; c.248A>C; c.248A>T; c.24dupG; c.25_26deIAA; c.251deIG; c.253_260deIACCTTTGC; c.235deIA; c.255dupC; c.257T>C; c.258dupT; c.255_265deICT; c.266_27deITG; c.266dupT; c.268A>C; c.298G>A; c.298G>C; c.298G>T; c.299A>C; c.299A>G; c.299A>T; c.27>A; c.277C>A; c.277C>T; c.279_280inSGTG6; c.270G>A; c.298G>A; c.330T>C; c.336G>C; c.30dupT; c.312C>G; c.315+14G<g; c.315+16="">A; c.316+16>A; c.316- 163<c; c.316+16="">T; c.316+2A>C; c.316+27>C; c.315+27>C; c.27>G; c.301_302deICCinSTCTGAGAACTT; c.302C>T; c.304G>A; c.300_5A>G; c.306G>C; c.304DT; c.332GP<g; c.304d="">A; c.335_388deIGCTGinsCCACA; c.386A>C; c.3361A>C; c.339_345dupTGTGCTG; c.339T>A; c.336A>C; c.336A>C; c.335_388deIGCTGinsCCACA; c.386A>C; c.347C>A; c.349_350insTGAT; c</g;></c;></g;></pre>



Update of Septembe	er 2024
РАН NM_000277.1	L1138dupA; c1130C-A; c1154T-A; c160C-A; c1028T-A; c1030C-A; c1030C-A; c1033C-T; c1024belG; c102E-CA; c1027T-A; c1045T-C; c1046C-A; c1028T-A; c1030C-A; c10354dF; c1033C-T; c10384belG; c102E-CA; c1045T-C; c1045T-C; c1046C-A; c1040C-T; c1049C-A; c10354dF; c10354dF; c1036C-T; c10654-16-A; c106541G-T; c10654-A5; c1066-3C-T; c108C-A; c1040C-CT; c1049C-A; c10554dF; c10354dF; c106641C-C; c10894dF; c10654-A5; c1066-3C-T; c1068C-A; c1080C-C; c11307-C; c1104C-A; c1106541C-C; c1114A-T; c105541C; c10654-A5; c1066-3C-T; c1058C-A; c1058C-A; c1058C-A; c1106C-A; c1106C-A; c1106C-A; c1106C-C; c1114A-T; c1118C-A; c11040C; c1123C-G; c112904tF; c1127C-C; c11174T-A; c1174C-C; c11144C-T; c11494Ed; c11534dC; c1157A-5G; c116_118dtGTT; c1172C-C; c1174T-A; c1174C-C; c11164C-G; c11804C-C; c1109A-T; c1183C-C; c1184C-A; c1184C-G; c1187A-C; c1196T-C; c1197A-T; c11984dB; c1199+17C-A; c1196C-C; c1109A-T; c1183C-C; c11994-TC; c1203C-A; c1237A+G; c1199C-C; c12001-G2; c12001-G2A; c12002-A5; c1200-A5; c12005-C; c12054C-T; c12054C-T; c122C-T; c122C-T; c122C-T; c122C-T; c122C-T; c122C-T; c122C-T; c122C-T; c122C-T; c122C-T; c1236A-T; c1236A-T; c1236C-T; c1236C-T; c124A-G; c1240-G; c1298dupT; c1301C-A; c1304A-T; c1306d+T; c1314_1315-4deC(CTAA; c13154-T6-A; c13154-T6-A; c131542T-C; c13154A-A; c1306-A; c1366-A; c1366-A; c1366-A; c1380C-T; c1382C-T; c1282C-T; c128-T6; c131542T-C; c13154A-A; c1306A-A; c1366-A; c1366-A; c1366-C; c1374dC; c1382C-T; c1282-T4, c1354-T6, c1364-T6, c1384-T6, c13154-T7-C; c1280A-T; c2392A-G; c169C-A3; c169C-T; c117_1724deGA; c1384C-T; c1382-T4, c1382C-T4, c1384-T6, c2394C-T4, c230-A5; c1650T; c157-G; c166-168+1deGGina4; c166-C; c1374C-T; c2382-T; c2382-A; c1384-C5, c240-A7; c1352A-C; c1384-A7; c240-A5; c2404-T2, c240-A; c240A-C; c230C-A; c240A-T; c2374-C; c240-T7; c1374-C; c1354A-C; c256C-T; c2374-C; c2392C-C; c237-C; c27-C; c27-C; c21C-A; c230-A; c2382-A; c1384-C5, c2382-A; c1384-C5, c2382-A; c1384-C5, c2382-A; c
PMM2 NM_000303.2	c.447+5G>A; c.179-1G>C; c.192C>G; c.435C>G; c.661T>G; c.72delT; c.104T>A; c.109C>T; c.127G>A; c.131T>C; c.157C>T; c.160dupG; c.178+1G>A; c.178+2T>G; c.178G>T; c.179-1G>T; c.189delA; c.190delT; c.193G>T; c.1A>G; c.205C>T; c.24delC; c.255+1G>A; c.255+2T>C; c.256-1G>C; c.256-2A>G; c.26G>A; c.27C>A; c.28C>T; c.310C>G; c.317A>T; c.323C>T; c.324delG; c.337C>A; c.338C>T; c.345dupG; c.347+1G>A; c.348-1G>C; c.348-2A>C; c.349G>C; c.349G>T; c.355T>C; c.357C>A; c.359T>C; c.367C>T; c.368G>A; c.385G>A; c.392delC; c.394A>T; c.395T>C; c.414delA; c.415G>A; c.421C>T; c.422G>A; c.430T>C; c.432C>A; c.442G>A; c.448-1_448delGA; c.44G>C; c.451_454delGAAA; c.454_455delAA; c.458T>C; c.470T>C; c.484C>T; c.488_491delAAGA; c.511dupA; c.524-2A>G; c.53C>G; c.548T>C; c.55delG; c.560G>A; c.561G>A; c.563A>G; c.580C>T; c.58C>T; c.620T>C; c.623G>C; c.639+1G>A; c.640-9T>G; c.640G>A; c.647A>G; c.647A>T; c.652C>G; c.653A>T; c.66+1delG; c.66+1G>T; c.669C>G; c.67-2A>T; c.677C>G; c.682G>T; c.687C>G; c.691G>A; c.710C>G; c.710C>T; c.713G>A; c.722G>C; c.95_96delTAinsGC; c.95T>G; c.97C>T.
GAA NM_000152.4	c32-13T>G; c.766_785delTATATCACAGGCCTCGCCGAinsC; c32-1G>C; c32-2A>G; c.1001G>A; c.1003G>A; c.1004G>A; c.1030_1031delGG; c.1051delG; c.1062C>A; c.1064T>C; c.1075G>T; c.1076-1G>A; c.1076-22T>G; c.1076- 2A>G; c.1082C>T; c.1099delT; c.1100G>A; c.1115A>T; c.1124G>T; c.1128_1129delGGinsC; c.1129G>C; c.1130delG; c.1134C>G; c.1143delC; c.1153delC; c.1156C>T; c.1165delG; c.118C>T; c.1192delC; c.1192dupC; c.1193delT; c.1193T>C; c.1194+2T>C; c.1195-1G>A; c.1195-2A>C; c.1195-2A>G; c.1210G>A; c.1211A>G; c.1222A>G; c.1225dupG; c.1226_1227insG; c.1292_1295dupTGCA; c.1309C>T; c.1316T>A; c.1320_1322delGAT; c.1326+1G>A; c.1326+2T>C; c.1327-2A>G; c.1377dupC; c.1378G>A; c.1396delG; c.1408_1410delAAC; c.1411_1414delGAGA; c.1426_1429delCTGAinsGTTGG; c.1431delT; c.1432G>A; c.1437+1G>A; c.1437+2T>C; c.1437G>A; c.1438-1G>C; c.1438- 1G>T; c.1441delT; c.1441T>C; c.1445C>T; c.1447G>A; c.1464dupC; c.1465G>A; c.1478C>T; c.148G>T; c.1496G>A; c.1501_1515delGACATGGTGGGCTGAG; c.1519dupC; c.1538A>G; c.1548G>A; c.1551+1G>C; c.1551+1G>T; c.1552-2A>G; c.1552-3C>G; c.1556T>C; c.1561G>A; c.1564C>A; c.1564C>T; c.1567delT; c.1579delA; c.1585_1586delTCinsGT; c.1585T>C; c.1634C>T; c.1650dupG; c.1654delC; c.1655T>C; c.1657C>T; c.1669A>T; c.1687C>T; c.1692delT; c.169C>T; c.1716C>G; c.1725C>A; c.172C>T; c.1735G>A; c.1754+1_1754+7delGTGAGGG;



Update of Septembe	
	c.1754+1G>A; c.1755-1G>A; c.1761_1765delGGTGAinsT; c.1781G>A; c.1796C>A; c.1798C>T; c.1799G>A; c.1802C>A; c.1802C>G; c.1802C>T; c.1804A>G; c.1820G>A; c.182CC>T; c.1824_1828dupATACG; c.1826dupA; c.1827_1828insA; c.1827delC; c.1832G>A; c.1886 c.1827_1828insA; c.1827delC; c.1833G>A; c.1883C>G; c.1841C>A; c.1841C>T; c.1843G>A; c.1844G>A; c.1847dupA; c.1827_1828insA; c.1827delC; c.1833G>A; c.1933G>C; c.1933G>T; c.1935C>A; c.1910_1918delTGGGGTGC; c.1912G>T; c.1913G>T; c.1927G>A; c.1933G>A; c.1933G>C; c.1933G>T; c.1935C>A; c.1941C>A; c.1941C>G; c.1942G>A; c.1943G>A; c.1941C>G; c.2014C>T; c.2015G>A; c.2024_2026delACA; c.2040+1delG; c.2044+1G>T; c.2041+1G>A; c.2061delC; c.2014C>T; c.2015G>A; c.2074C>T; c.2078dupA; c.2082delC; c.2104C>T; c.2015G>A; c.2105G>T; c.2074C>T; c.2078dupA; c.2082delC; c.2104C>T; c.2041+1G>A; c.205GA; c.2105G>T; c.2105G>T; c.2105GA; c.2105G>T; c.227C>T; c.2228A>G; c.2236T>C; c.2186G>T; c.2161delG; c.2161dupG; c.2167_2179delGTGGCCCGGGCCCCInsTGCGACGTGG; c.2173C>T; c.2185delC; c.2186G>T; c.2237G>A; c.2237G>C; c.2238G>A; c.2238G>C; c.2242delG; c.2242dupG; c.2242G>T; c.2228A>G; c.2236T>C; c.2237G>A; c.2237G>C; c.2237G>C; c.2238G>A; c.2238G>C; c.2242delG; c.2242dupG; c.2242G>T; c.22426G c.2242delC; c.2242delG; c.2242dupG; c.2242G>T; c.2269C>T; c.2281delGinsAT; c.284G>T; c.2297A>C; c.2300delT; c.238dupC; c.2608C>T; c.2617dupT; c.2646+2T>A; c.2662G>T; c.266G>A; c.2704_2716dupCAGAAGGTGACTG; c.2704C>T; c.2706delG; c.2740C>T; c.2475C>T; c.2495_2496delCA; c.2512_25T; c.2544delC; c.2580C>T; c.258delC; c.390C>A; c.370A3C>T; c.352C>T; c.365delT; c.376A4; c.377G>A; c.379_380delTG; c.393delC; c.390T>C; c.307T>G; c.3424elG; c.2343C>T; c.352C>T; c.365delT; c.376A4; c.378G>A; c.379_380delTG; c.3902HC; c.390C>A; c.4374elT; c.4840pG; c.461_469delGTACCACCC; c.461AC>C; c.471delC; c.4542_483delC; c.462_T; c.255_25delTG; c.525delT; c.556C>T; c.556C>A; c.671G>C; c.692+1G>A; c.692+1G>C; c.692A4; c.711_712dupGC; c.716delT; c.722_723delTT; c.776A; c.3766A>; c.576C>A; c.555delC; c.564G>A; c.591C>T; c.5570A; c.6838+2T>A
AGXT NM_000030.2	c.1007T>A; c.1014C>G; c.1045G>A; c.1049G>A; c.106C>T; c.1071+1G>A; c.1076T>C; c.1079G>A; c.1079G>C; c.107G>A; c.1084G>A; c.1102G>A; c.1110_1111delCG; c.1125_1126delCG; c.1148C>A; c.1151T>C; c.116_117dupCA; c.121G>A; c.122G>A; c.122G>T; c.125G>A; c.126delG; c.126dupG; c.130C>T; c.139G>A; c.166-1G>A; c.166-2A>G; c.167T>A; c.177G>A; c.187G>C; c.198C>G; c.2_3delTGinsAT; c.205C>T; c.209C>A; c.215dupA; c.221_227dupTCACACT; c.242C>A; c.242C>T; c.244G>C; c.245G>A; c.248A>G; c.254C>A; c.276delT; c.283_285dupGAG; c.283G>A; c.28C>T; c.27C; c.302T>C; c.32_33delC; c.322T>C; c.323G>A; c.324G>T; c.326G>T; c.327delG; c.32CCG; c.331C>T; c.332G>A; c.335C>A; c.33delC; c.33dupC; c.346G>A; c.349G>T; c.358+1G>T; c.358+2T>G; c.364C>T; c.374_381delCGATGACC; c.3G>T; c.406_410dupCTGCA; c.409C>T; c.416_418delTGG; c.423+1G>A; c.423G>T; c.424 2A>G; c.445delG; c.447_454del; c.449T>C; c.454T>A; c.457T>G; c.460delA; c.466G>A; c.466G>C; c.473C>A; c.473C>T; c.481G>A; c.481G>C; c.481G>T; c.497T>C; c.508C>A; c.518G>A; c.519C>A; c.524+2T>A; c.525-1G>A; c.533G>A; c.547G>A; c.557_562delCATCCCinsATCGGT; c.560C>T; c.568G>A; c.613T>C; c.614C>A; c.614C>T; c.688A>C; c.584T>G; c.595G>A; c.596-2A>G; c.603C>A; c.605T>A; c.612C>A; c.613T>C; c.614C>A; c.614C>T; c.680+1G>A; c.680+1G>C; c.737G>A; c.738G>A; c.744delC; c.771-2G; c.7752delTGinSAA; c.753G>A; c.775doPC; c.776+1G>A; c.736S>A; c.786G>A; c.744delC; c.771-2A>G; c.771>C; c.783T>A; c.798_802delCATCAinsACAATCTCAG; c.804G>C; c.8247-1G>C; c.823A>C; c.834delC; c.834delC; c.841G>T; c.844C>T; c.846+1G>A; c.846T>C; c.893T>C; c.907C>T; c.9104dlG; c.922C>T; c.942+1G>T; c.943-1G>T; c.860_861delGGinSCG; c.891T>G; c.871dC>C; c.877-2A>G; c.7752C <t; c.942+1g="">T; c.943-1G>A; c.943-1G>T; c.956C>T; c.959_960delCA; c.971_972delTG; c.973delG; c.973delG; c.983_988delCTGGCT; c.996G>A; c.997A>T; c.449T>C; c.454T>A; c.457T>G; c.460delA.</t;>
<i>HADHA</i> NM_000182.4	c.2114T>A; c.1981_1999delCTGCCTCCTAAGTCTGAAG; c.2020C>T; c.2200A>T; c.1025T>C; c.1052delA; c.1070delC; c.1086-3_1092delCAGGCATCTG; c.1132C>T; c.1195C>T; c.1202delA; c.1221-1G>C; c.1237A>T; c.129dupT; c.1344_1345delGT; c.1422dupT; c.1427_1428delCA; c.1479+1G>T; c.1528G>C; c.157C>T; c.1590delC; c.1620+2_1620+6delTAAGG; c.1637A>G; c.1644delC; c.1645A>G; c.1668_1674dupTGAAGTC; c.1678C>T; c.1689+2T>G; c.1690-2A>G; c.1720_1721delCT; c.1793_1794delAT; c.180_180+5delGGTATCinsAT; c.180+1G>A; c.180+3A>G; c.1811delG; c.1814_1815delAA; c.1885G>A; c.1915_1918delTATC; c.1916_1919dupATCA; c.1918C>T; c.1959dupT; c.1967delT; c.1A>G; c.2000+1G>C; c.2026delC; c.2027G>A; c.2059delA; c.2071G>T; c.2132dupC; c.2134_2138dupCCTTG; c.2146+1G>A; c.2146+2T>C; c.220T>A; c.2222delG; c.2225_2228dupAACA; c.2227_2228delCA; c.240G>A; c.274_278delTCATC; c.315-1G>A; c.3G>A; c.403A>G; c.407C>G; c.499delA; c.515delC; c.539C>T; c.574- 2A>G; c.612dupT; c.64C>T; c.676+1G>A; c.676+2T>C; c.677-1G>A; c.703C>T; c.72delT; c.800-1_801delGAA; c.800- 1G>T; c.844_845insA; c.845T>A; c.871C>T; c.914T>A; c.914T>C; c.919-2A>G.
CBS NM_000071.2	c.536_553delACGTGCTGCGGGCACTGG; c.18_36delCCAGGCAGAAGTGGGGCCC; c.1005_1006delCCinsTT; c.1006C>T; c.1007G>A; c.1009_1012delATGC; c.1039G>A; c.1051G>C; c.1058C>T; c.1087delG; c.1109G>A; c.1111G>A; c.1126G>A; c.1135C>T; c.1136G>A; c.1150A>G; c.1152G>C; c.1218delG; c.1219_1223+8delCCCTGGTAAGACC; c.1221delC; c.1223+1G>T; c.1223G>A; c.1224-2A>C; c.1226G>A; c.1227G>A; c.1280C>T; c.1316G>A; c.1321A>T; c.1330G>A; c.1358+1G>A; c.1358+2T>C; c.1359-1G>C; c.1468-1G>A; c.146C>T; c.1498_1499delTC; c.153_165delGTGCACCTGGCAG; c.1545delG; c.1552+1G>A; c.156C>A; c.1603_1604delAC; c.162G>A; c.19delC; c.19dupC; c.208_209+8delCCGTAAGTCC; c.209+1G>A; c.209+1G>C; c.209+2T>C; c.233C>G; c.253G>A; c.284T>C; c.28delG; c.302T>C; c.306G>C; c.316+1G>A; c.325T>C; c.340G>A; c.341C>T; c.346G>A; c.361C>T; c.362G>A; c.371_374dupTGCG; c.373C>T; c.393G>C; c.402delG; c.403_404delACinsG; c.415G>A; c.429C>G; c.430G>A; c.434C>T; c.442G>A; c.451+1G>T; c.451G>A; c.457G>A; c.463G>A; c.467delT; c.476_477insCAGGGCCC; c.494G>A; c.502G>A; c.526G>A; c.526G>T; c.532-2A>G; c.572C>A; c.572C>T; c.667-14_667-7delCTCTTTCT; c.676G>A; c.684C>A; c.684C>A; c.689delT; c.700G>A; c.707_708delCCinsGGTG; c.736+2T>G; c.737-1G>C; c.738delG; c.770C>T; c.785C>T; c.797G>A; c.816T>A; c.828+1G>A; c.829-1G>C; c.833T>C; c.903C>G; c.904G>A; c.919G>A; c.941T>C; c.954+1G>A; c.954+2T>G; c.959T>C; c.969G>A; c.992C>A; c.1553-1G>C; c.1553-2A>C; c.1566delG; c.1576C>T.
ARSA NM_000487.5	c.257G>T; c.270C>A; c.774delA; c.1007T>C; c.1010A>T; c.1036delG; c.1079T>C; c.1087dupC; c.109_116delGACCTGGG; c.1107+1delG; c.1108-2A>G; c.1114C>T; c.1123_1126delCTCT; c.1125_1126delCT; c.1210+1G>A; c.1210+1G>T; c.1222_1232delAGTGATACCAC; c.1223_1231delGTGATACCA; c.1229C>T; c.1232C>T; c.1264delC; c.1269delT; c.1274A>G; c.1279C>A; c.1283C>T; c.1323delC; c.1337delG; c.1344dupC; c.1366C>T; c.1378C>T; c.1388delT; c.1408_1418delGCAGCTGTGAC; c.1447G>T; c.1462C>T; c.1489_1492dupCCCC; c.1492dupC; c.157C>T; c.179G>C;



Update of Septembe	
	c.185_186dupCA; c.195delC; c.200delC; c.206_209delCTCT; c.211_212delTG; c.224+1G>A; c.225-2A>G; c.227_228insTA; c.229G>C; c.240dupC; c.244delC; c.245G>A; c.256C>T; c.257G>A; c.263G>A; c.292_293delTCinsCT; c.293C>T; c.295dupC; c.2T>C; c.302delG; c.302dupG; c.302G>A; c.302G>T; c.335T>A; c.346C>T; c.34delG; c.370G>A; c.371G>A; c.410T>C; c.418delC; c.418dupC; c.421C>T; c.433C>G; c.433C>T; c.442G>A; c.449C>G; c.449C>T; c.451dupT; c.465+1G>A; c.465+2T>A; c.466-2A>G; c.467delG; c.467G>A; c.470C>G; c.474C>A; c.494dupC; c.495_501delGCCGGCC; c.506C>G; c.526C>T; c.542dupT; c.542T>G; c.545C>G; c.545delC; c.582delC; c.582dupC; c.583delT; c.641C>T; c.674_675dupAT; c.677C>A; c.677C>T; c.684+1G>A; c.685-1G>A; c.697C>A; c.700C>T; c.712C>T; c.736C>T; c.737G>A; c.739G>A; c.746T>C; c.758dupT; c.763G>A; c.769G>C; c.827C>A; c.827C>T; c.836_837delTCinsAA; c.847G>T; c.852T>A; c.854+1G>A; c.905G>T; c.917C>T; c.925dupG; c.925G>A; c.925G>T; c.926A>T; c.929delG; c.929G>T; c.931G>A; c.931G>C; c.937C>T; c.938G>A; c.942G>T; c.991G>T; c.1136C>T; c.1150G>A; c.1174C>T; c.1175G>A; c.1201_1203delTTC; c.608A>G; c.622delC.
BTD NM_001281723.2	c.1213T>G; c.1461C>G; c.1007_1008delTT; c.1007T>A; c.104_110delGCGGCTGinsTCC; c.1055delC; c.1058delC; c.106_107delGG; c.107_110delGCTG; c.1087T>G; c.1091T>A; c.110_111delGT; c.1102_1103dupTC; c.1102T>C; c.1133C>T; c.1135G>T; c.113dupA; c.1163G>A; c.1164G>A; c.1176_1177dupTC; c.1197_1198delGA; c.1220T>C; c.1233_1247delGGGAAAGGCTAinsTTCCAATGGCC; c.124_125delCT; c.1245delC; c.1247_1258delATCTCCACGTCT; c.1255G>T; c.1258T>C; c.1259G>C; c.1270dupC; c.1273T>C; c.1274G>C; c.1277G>A; c.1273G>C; c.1281T>G; c.1290C>A; c.1313_1314delAG; c.1319A>G; c.1320T>A; c.1330delG; c.1334T>C; c.1336G>C; c.1339G>A; c.1340G>A; c.1340G>T; c.1345C>T; c.1358_1359delGC; c.1358G>A; c.1364dupA; c.1367A>G; c.1374A>C; c.1375G>A; c.1378dupT; c.1390delA; c.1400dupG; c.1416dupC; c.142G>T; c.1453G>T; c.1464GelG; c.1465G=A; c.1467G>A; c.1485delC; c.1495C>T; c.1499dupT; c.1514_1518delGGATG; c.1517T>A; c.1531C>T; c.1532C>G; c.161dupT; c.1534T>G; c.1601C>T; c.1607C>T; c.1616G>A; c.1618C>T; c.1619G>A; c.1522dupT; c.1533G>C; c.1634A>G; c.1634A>T; c.1635C>A; c.166G>T; c.177T>G; c.190G>A; c.190G>T; c.196G>A; c.198G>C; c.200A>G; c.208_211dupATCC; c.241C>T; c.242G>A; c.251C>A; c.251C>T; c.253_261delTTGGAGCTC; c.263T>G; c.268C>T; c.269delA; c.272delA; c.284A>G; c.289C>T; c.304G>A; c.305C>T; c.314delA; c.315+1G>A; c.310+1G>T; c.316G>T; c.322C>T; c.327T>G; c.328A>G; c.329_330dupTA; c.332dupT; c.3321>G; c.340G>A; c.340G>C; c.434G>T; c.436C>T; c.440C>T; c.44+1deG; c.44+1G>A; c.44+1G>C; c.44+1G>T; c.448C>T; c.449G>A; c.430C>T; c.434G>T; c.430A>T; c.43C>T; c.44_44+3delGGTA; c.44+1deG; c.44+1G>A; c.44+1G>C; c.44+1G>T; c.448C>T; c.449G>A; c.451T>C; c.460A>C; c.461C>G; c.465G>A; c.466-2A>G; c.472C>T; c.475C>T; c.476G>A; c.485C>T; c.496_9A; c.451T>C; c.460A>C; c.461C>G; c.65G>A; c.466-2A>G; c.77CT>A; c.750C>T; c.476G>A; c.485C>T; c.496_9A; c.451T>C; c.460A>C; c.461C>G; c.65G>A; c.466-2A>G; c.472C>T; c.475C>T; c.476G>A; c.485C>T; c.496_9A; c.451T>C; c.460A>C; c.461C>G; c.65G>A; c.660A <c; c.670c="">T; c.707C>A; c.750A>G; c.590A>G; c.590A>G; c.570A>G; c.570A>G; c.570A>G; c.5</c;>
<i>SLC26A2</i> NM_000112.3	c.117delC; c.1303dupA; c.1639C>T; c.166delAinsCTC; c.1714delC; c.223C>T; c.294G>A; c.2T>C; c.1800C>G; c.854C>A; c.909T>A; c.1020_1022delTGT; c.1060G>T; c.1157C>T; c.1242_1245delAAAC; c.1273A>G; c.1311dupT; c.1338delA; c.1343C>G; c.1361A>C; c.138dupT; c.1394delT; c.1421delT; c.1432delC; c.1441delA; c.1451G>A; c.145delA; c.15_19delTAAAG; c.1535C>A; c.1537_1541dupGTTAT; c.1565C>T; c.1596delT; c.1607_1610delGTTT; c.1649delA; c.1650delG; c.1655C>A; c.1707C>G; c.1724delA; c.1764C>A; c.1777G>T; c.1806_1809delAACT; c.1817delC; c.1831delG; c.1859delA; c.185C>G; c.1878delG; c.188delA; c.1926delT; c.1950delG; c.1955_1958delACTG; c.1956_1957dupCT; c.1957T>A; c.1976delT; c.207delT; c.2120_2121delTT; c.2144C>T; c.235C>T; c.239_243dupGCAGT; c.255delC; c.299delC; c.325_326delTT; c.331G>T; c.374A>T; c.387T>G; c.391delC; c.398C>T; c.540C>A; c.4382delT; c.438dupT; c.499delG; c.532C>T; c.541C>T; c.55G>T; c.578_581delCCTT; c.611T>G; c.63_64delCA; c.642_643delAA; c.697C>T; c.870delG; c.906_907delCT; c.918delG; c.922delA; c.925delC; c.3925
<i>CFTR</i> NM_000492.3	C164+3_164+4insT; c9_14delCGAGAGACCATGCAGAGGTCGCC; c.459_476delAATAGCTATGTTTAGTTT; C.723_743+1delGAGAATGATGATGAAGAGACAATGCAGG; c.1558G>A; c.1684G>C; c.2657+2_2657+3insA; c.2909-15T>G; C.2916_2952delTCTTAATAGATTCTCCAAAGATATAGCAATTTTGGAT; c.3038C>A; c.3718-2477C>T; c.1579_1584+11del; C.330C>A; c.2816A>G; c.2393dup; c.577G>A; c.1742dup; c.1652delG; c.2777delT; c.3000_3014del; c.926C>A; C.1713_1714delAG; c.1546A>G; c.358G>A; c.1000C>T; c.1001G>T; c.1001G>T; c.1000_1007insG; c.1007T>A; C.1008_1019dupATTCACCACCAT; c.1013C>T; c.1021_1022dupTC; c.1021T>C; c.1029delC; c.1037T>C; c.1040G>A; C.1040G>C; c.1040G>T; c.1045G>C; c.1046C>T; c.1054C>T; c.1055G>A; c.1057C>T; c.1075C>A; c.1079C>A; C.1081delT; c.1081T>C; c.1117-1G>A; c.1117-2A>G; c.117G>A; c.1126C>T; c.1130dupA; c.1135G>T; c.1141A>T; C.116+1G>T; c.1116=T; c.1117-1G>A; c.1117-2A>G; c.117G>A; c.1126C>T; c.130dupA; c.1135G>T; c.1203G>A; C.1209+1G>A; c.1209+1G>T; c.1209+2T>G; c.1209G>C; c.1210-2_1210-1delAG; c.1210-2A>C; c.1211delG; C.1219G>T; c.1234_1238delGCAAA; c.1235delC; c.1239dupA; c.1240C>T; c.1248dupT; c.1301_1307delCACTTCT; C.1301C>A; c.1301C>G; c.1315C>T; c.131A>G; c.1324A>T; c.1327_1330dupATA; c.1327G>T; c.1372delG; c.1373G>T; C.1375_1383delTCCACTGGA; c.137C>A; c.139C>G; c.139C>T; c.1390A>G; c.1391A>C; c.1400T>C; c.1405A>G; C.1490_1418delTGATTATGGG; c.1417C>C; c.1397C>T; c.1390A>G; c.1391A>C; c.1400T>C; c.1405A>G; C.147_150delATCATGGA; c.137C>A; c.1397C>T; c.1390A>G; c.1391A>C; c.1400T>C; c.1405A>G; C.1405A; c.1397C>A; c.1397C>A; c.1397C>T; c.1517C>T; c.1580A>G; c.1519_1521delATC; c.1519A>T; C.1505T>A; c.1505T>C; c.1510G>T; c.1516A>C; c.1517T>C; c.1518C>G; c.1519_A; c.148T>C; c.14C>T; C.1505T>A; c.1505T>C; c.1500T>C; c.1538A>T; c.1559A>G; c.1517T>C; c.1548A C.1584+1G>A; C.1584+2T>C; c.1642_1643delCT; c.1585-80>; c.1517T>C; c.1518C>G; c.1519_1521delATC; c.1519A>T; C.1584+2T>C; c.1642_1643delCT; c.1585-80>; c.1517T>C;



c.1679+1G>A; c.1679+1G>C; c.1679G>A; c.1679G>C; c.1680-1G>A; c.1680-1G>C; c.1680A>C; c.1682C>A; c.1687T>A; c.1687T>C; c.1687T>G; c.168delA; c.1692delA; c.1694A>G; c.169T>G; c.1700A>C; c.1703delT; c.1703T>A; c.1705T>C; c.1705T>G; c.1706A>G; c.1707T>A; c.170G>A; c.1712T>C; c.171G>A; c.1721C>A; c.1724T>A; c.1731C>A; c.1733_1734delTA; c.1736A>G; c.174_177delTAGA; c.1753G>T; c.175dupA; c.1760T>C; c.1763A>T; c.1766+1G>A; c.1766+1G>C; c.1766+1G>T; c.1766+2T>A; c.1766+2T>C; c.1766+3A>C; c.1766+3A>G; c.1766+5G>T; c.1766G>A; c.1766G>T; c.1767-1G>A; c.178G>A; c.178G>T; c.179_180delAG; c.1792_1798delAAAACTA; c.1801A>T; c.1801delA; c.1811C>T; c.1826A>G; c.1826A>T; c.1837G>A; c.1841A>G; c.1853T>C; c.1865G>A; c.1882G>A; c.1882G>C; c.1904delA; c.1911delG; c.1920_1921dupTA; c.1923_1931delCTCAAAACTinsA; c.1936G>T; c.1943A>T; c.1943delA; c.1966G>T; c.1973_1985delGAAATTCAATCCTinsAGAAA; c.1979C>G; c.1981delA; c.1986_1989delAACT; c.1990G>T; c.19G>T; c.1A>G; c.200C>T; c.2012delT; c.2017G>T; c.2036G>A; c.2044delA; c.2044dupA; c.2045delC; c.2045dupC; ..2051_2052delAA; c.2051_2052delAAinsG; c.2051_2052dupAA; c.2052delA; c.2052dupA; c.2053C>T; c.2053dupC; c.2065C>T; c.2083dupG; c.2089delA; c.2089dupA; c.2125C>T; c.2126G>A; c.2128A>T; c.2143C>T; c.2145_2146delAAinsGT; c.2146A>T; c.2158C>T; c.2173G>A; c.2175dupA; c.217delC; c.2184_2185insA; c.2195T>G; .2203delA; c.220C>T; c.2215delG; c.2233G>T; c.223C>T; c.2241_2248delGATACTGC; c.2249_2256delCTCGCATC; c.2249C>T; c.2252G>T; c.2290C>T; c.2291delG; c.2299C>T; c.2324_2325delAC; c.2327C>G; c.233delT; c.233dupT; c.234dupC; c.2353C>T; c.236G>A; c.2373delA; c.2374C>T; c.2395C>T; c.2417A>G; c.2423_242dupAT; c.2428A>T; .2429delG; c.243delT; c.2443delG; c.2443G>T; c.2450delG; c.2453delT; c.2463_2464delTG; c.2464G>T; :.2475_2478dupCGAA; c.2476G>T; c.2479G>T; c.2483dupA; c.2488A>T; c.2490+1G>A; c.2490+1G>T; c.2490+2T>C; c.2547C>A; c.254G>A; c.254G>T; c.2551C>T; c.2552G>T; c.2554dupT; c.2556T>G; c.2573delG; c.2583delT; ..2589_2599delAATTTGGTGCT; c.25dupG; c.2600T>A; c.2600T>G; c.2601dupA; c.2619+1G>A; c.262_263delTT; c.2620-2A>G; c.2639_2640dupTG; c.263T>A; c.263T>G; c.2644_2645dupTG; c.2645G>A; c.2657+1_2657+2insA; c.2657+5G>A; c.2658-1G>C; c.2658-1G>T; c.2658-2A>G; c.2668C>T; c.2700T>A; c.271G>A; c.2732C>A; c.273+1G>A; c.273+3A>C; c.2735C>A; c.2737_2738insG; c.2738A>G; c.2739T>A; c.273G>C; c.274-1G>A; c.274-1G>C; c.274-1G>T; c.274-2A>C; ..274-2A>Gc.274-5_274-2delTGTA; c.274G>A; c.274G>T; c.2757C>G; c.2758G>A; c.2763_2764dupAG; c.2768C>A; c.2780T>C; c.2797A>G; c.2805_2810delACCACTinsTCAGA; c.2810dupT; c.2812dupG; c.2813T>G; c.2822delT; c.2825delT c.2834C>T; c.2845C>T; c.2854delA; c.2855T>C; c.2856G>C; c.2869_2870insG; c.2875delG; c.2879_2882delCTAT; .2896delA; c.2900T>C; c.2908+1G>A; c.2908G>C; c.2909-1G>C; c.2909delG; c.2909G>A; c.2924_2925delGA; c.292C>T .2930C>T; c.2932A>T; c.2936A>C; c.2936A>T; c.2939T>A; c.293A>G; c.296C>T; c.2977G>T; .2982_2988+2delCATCCAGGT; c.2986dupC; c.2988+1G>A; c.2988+1G>C; c.2988+1G>T; c.2988+2T>C; c.2988G>A; .2989-1G>A; c.2989-2A>G; c.2989-2A>T; c.2993delT; c.2997_3000delAATT; c.2T>A; c.2T>C; c.2T>G; .3002_3003delTG; c.3011_3019delCTATAGCAG; c.3011delC; c.3014dupT; c.3014T>G; c.3017C>A; c.3022delG; .3032T>G; c.3039delC; c.3039dupC; c.303dupA; c.3047T>C; c.305T>G; c.3067_3072delATAGTG; c.3068_3072delTAGTG; :.3068T>G; c.3095A>G; c.3103C>T; c.3107C>A; c.3107C>T; c.310delA; c.3110C>A; c.3124C>T; c.3134C>A; .3139_3139+1delGG; c.3139+1delG; c.3139+1G>A; c.313delA; c.3140-1G>A; c.3140-26A>G; c.3154T>G; c.3160C>G; .3161delA; c.3181G>C; c.3184_3188dupCTATG; c.3188G>A; c.3189G>A; c.319_326delGCTTCCTA; c.3194T>C; c.3196C>T; c.3197G>A; c.3197G>T; c.3200C>T; c.3205G>A; c.3209G>A; c.3211C>T; c.3212A>C; c.3217dupT; c.3229_3230delCT; c.3230T>C; c.3231_3232delGT; c.323C>T; c.325_327delTATinsG; c.3254A>G; c.325T>C; c.3263dupA; :.3264delC; c.326A>G; c.3266G>A; c.3276C>A; c.3276C>G; c.327T>A; c.328G>C; c.328G>T; c.3292T>C; c.3293G>A; c.3294G>A; c.3294G>C; c.3294G>T; c.3297C>A; c.3299A>C; c.3302T>A; c.3302T>G; c.3304A>T; c.3310G>T; c.331C>G; c.3324delC; c.332C>T; c.3343dupA; c.3353C>T; c.3367+1G>A; c.3367+2T>A; ; c.3368-2A>G; c.3368-2A>T; .3400_3401delACinsGTA; c.3404T>A; c.3410T>G; c.3415A>G; c.3419_3421delTGA; c.3421_3424dupAGTA; c.3435G>A; .3454G>C; c.3458T>A; c.3461A>G; c.3468+1G>A; c.3468+1G>T; c.3468+2dupT; c.3468+2T>C; c.3468+5G>A; ..3468G>A; c.3469-2A>G; c.346G>A; c.3472C>T; c.3475T>C; c.3476C>T; c.3484C>T; c.3492dupT; c.3486_3487delAG; :.3495delG; c.349C>G; c.349C>T; c.350G>A; c.350G>C; c.350G>T; c.3528delC; c.3529A>T; c.3530delA; 3532_3535dupTCAA; c.3533C>A; c.3536_3539delCCAA; c.3540delA; c.3546C>G; c.3546delC; c.3569_3570delTT; .3587C>G; c.3598_3599delAAinsG; c.3599_3600delAAinsG; c.3605delA; c.3611G>A; c.3612G>A; c.3617C>A; c.3617C>G; .3717+4A>G; c.3717+5G>A; c.3717G>A; c.3718-1G>A; c.3718-3T>G; c.3719T>G; c.3728T>A; c.3731G>A; c.3737C>T; .3739G>A; c.3741_3742insATCAG; c.3744delA; c.3745G>A; c.3745G>C; c.3746G>A; c.3747delG; c.3752G>A; ..3761T>G; c.3764C>A; c.3763T>C; c.3767dupC; c.376G>A; c.3773dupT; c.377G>A; c.3796G>T; c.380_382dupTAT; :.3806T>A; c.3808delG; c.3808G>A; c.3822G>A; c.3838C>T; c.3841C>T; c.3844T>G; c.3846G>A; c.3851_3852dupAA; 3848G>T; c.3857T>C; c.3859G>T; c.3872A>G; c.3873+1G>T; c.3873+1G>A; c.3873+2T>C; c.3873G>C; c.3874-1G>A; .3874-2A>G; c.3874-2A>C; c.3874-2A>G; c.3883_3884insG; c.3883_386delATTT; c.3883delA; c.3889dupT; c.3891dupT :.38C>T; c.3907A>C; c.3900dupT; c.3908A>T; c.3908delA; c.3909C>G; c.3922G>T; c.3925C>T; c.3929G>A; c.3937C>T; .3944_3951delTATGGAAA; c.3947G>A; c.3957_3958insAGGG; c.3963+1G>A; c.3963+1G>C; c.3963+2T>A; .3963+2T>G; c.3971T>C; c.3972delC; c.3988_3989delCA; c.3988C>T; c.3997G>T; c.3999delG; c.3G>A; c.4004T>C; c.4058delT; c.4071delT; c.4077_4080delTGTTinsAA; c.4086dupT; c.4078delG; c.409_412delCTCC; c.4097T>C; c.409delC; c.40A>T; c.410_416delTCCTACA; c.410T>C; c.4111G>T; c.4124A>C; c.4127_4131delTGGAT; c.4129G>C; c.413_415dupTAC; c.4136+1G>A; c.4143C>G; c.4144C>T; c.4147dupA; c.4168C>T; c.416A>G; c.4197_4198delCT; c.4199delG; c.4200_4201delTG; c.4225G>T; c.422C>A; c.4231C>T; c.4234C>T; c.4242+1G>A; c.4242+1G>T; c.4243-2A>G; c.4242+2T>C; c.424delA; c.4251delA; c.4252delG; c.4252G>T; c.4272C>A; c.4272C>G; c.4276T>C; c.4280T>C; c.4297G>T; c.429delT; c.4300_4301dupAG; c.4303dupA; c.4307_4320delTCTTCCGGCAAGCC; c.4329delC; c.4339delG; c.433delC; c.4364C>A; c.4364C>G; c.4389delG; c.4400delT; c.4417G>T; c.4426C>T; c.442delA; c.443T>A; c.445G>A; c.445G>T; c.44T>C; c.454A>G; c.470_483delTTAGTTTGATTTAT; c.476T>C; c.481T>G; c.483_484insCC; c.488delA; c.489+1G>T; c.489+2T>C; c.489+2T>G; c.489+3A>G; c.49_50dupTT; c.490-1G>A; c.490-1G>T; c.494T>C; c.4C>T; .4delC; c.506dupG; c.509G>A; c.50delT; c.50dupT; c.51delC; c.523A>G; c.53+1G>T; c.531delT; c.531dupT; c.532G>A; :.543_546delTAGT; c.544dupA; c.560delA; c.567C>A; c.56G>A; c.571T>G; c.575A>G; c.577G>T; c.579+1G>A; c.579+1G>T; c.579+3A>G; c.579+5G>A; c.57G>A; c.57G>T; c.580-1G>T; c.580-2A>C; c.580-2A>G; c.581G>T; .586dupG; c.592G>A; c.595C>T; c.596A>G; c.598T>A; c.601delG; c.613C>T; c.617T>G; c.619C>T; c.647G>A; c.653T>A; c.657dupA; c.658C>T; c.671delT; c.675T>A; c.680T>G; c.695T>A; c.708delT; c.717delG; c.739_742dupTACA; c.742A>G; c.743+1G>A; c.743+1G>C; c.743+2T>C; c.743G>C; c.744-2A>G; c.755delCinsGCTGGGAAGAT; c.772A>G; .773delG; c.794T>G; c.79G>A; c.79G>T; c.803delA; c.805_806delAT; c.808C>T; c.811delT; c.825C>G; c.828C>A; .830G>A; c.835G>T; c.848_860delAAATGATTGAAAAinsTG; c.850dupA; c.859A>T; c.860dupA; c.861_865del; c.863T>G; .865_869delAGACA; c.865A>T; c.868C>T; c.869+1G>C; c.869+1G>T; c.870-1G>C; c.870-2A>G; c.874_875delGA; .874G>T; c.888_889dupTC; c.88C>T; c.892A>T; c.912C>G; c.930delC; c.933C>G; c.935_937delTCT; c.941G>A;



Update of September 2024	
	c.948delT; c.950T>A; c.958T>G; c.959delT; c.959T>A; c.987delA; c.988G>T; c.997C>T; c.3080T>C; c.3208C>T; c.2998del; c.2859_2890del; c.1523T>G; c.4097T>A; c.4439T>C; c.709C>G; c.1366G>T; c.1689C>A; c.307G>T; c.3254A>C; c.3600del; c.461dup; c.761del; c.980del; c.1076A>G; c.1470_1471del; c.156_163dup; c.202A>T; c.3365del; c.3382A>T; c.580G>A; c.580G>T; c.1069del; c.1302del; c.1375_1385del; c.1446dup; c.1585-1G>T; c.1679+2T>C; c.1786_1787del; c.1954C>T; c.2062A>T; c.2156T>A; c.2188G>T; c.2261del; c.2335C>T; c.2341C>T; c.234del; c.3576_2588del; c.2440C>T; c.2619+2T>C; c.273+2T>G; c.2964dup; c.3007G>T; c.3008del; c.3106del; c.3275_3290del; c.3397del; c.3407_3422del; c.357del; c.3615del; c.3904A>T; c.3921T>A; c.3307del; c.4028dup; c.3976del; c.489+1G>A; c.498del; c.522_526del; c.54+1G>A; c.543_556del; c.548del; c.550del; c.581_582del; c.708dup; c.764del; c.850del; c.1025_1026insTA; c.1053_1054del; c.1068G>A; c.1116_1116+1insATCAA; c.1118dup; c.112_113del; c.1130del; c.1132C>T; c.1157dup; c.1162_1163delinsTA; c.1209+1G>C; c.1210-1G>C; c.1210-1G>T; c.1221del; c.1243_1247del; c.1880del; c.1360_1387del; c.1366del; c.1892dup; c.1766+2del; c.177dup; c.1902A>T; c.1800del; c.1807del; c.1897_2000del; c.2000_2001del; c.2057_2058delinsA; c.2074G>T; c.2083del; c.2091del; c.21487del; c.1977_1986del; c.2592_2593del; c.2615del; c.2619+2T>A; c.2620-1G>T; c.2705del; c.2732_273insA; c.2733_2734insA; c.2776_2777del; c.2592_2593del; c.2615del; c.2619+2T>A; c.2620-1G>T; c.2705del; c.2732_273insA; c.2733_2734insA; c.2776_2777del; c.2803_2813del; c.2816del; c.2819_2823del; c.2819_2820insA; c.2836A>T; c.285dup; c.2583_2886dup; c.2897del; c.2892_2900delinsA; c.2989-1G>T; c.2989-2A>C; c.3033dup; c.3081dup; c.3136G>T; c.33674el; c.3367+1G>T; c.3367+12T>C; c.3176T>G; c.3227_3211del; c.3299_40LS; c.391240LS; c.3734del; c.3324del; c.3367+1G>T; c.3367+12T>C; c.3368- 1G>A; c.3384_3388del; c.388_3402del; c.3876del; c.3917_3918dup; c.3387del; c.39274del; c.3397_3914el; c.3556C>T; c.3592del; c.3652dup; c.3658dup; c.367dup; c.3703del; c.3724del; c.3754d
<i>GALT</i> NM_000155.3	 c.1014C>G; c.1001A>G; c.1006A>T; c.100T>A; c.1018G>A; c.1018G>T; c.1024C>A; c.1030C>A; c.1030C>T; c.1034C>A; c.1047delC; c.1048A>G; c.1048delA; c.1052delC; c.1057C>T; c.1059+1G>T; c.1060-1G>A; c.1072delC; c.1098C>A; c.1138C>T; c.1138T>C; c.1139G>C; c.113A>C; c.1140A>C; c.118G>A; c.118G>T; c.130G>A; c.130G>A; c.130G>T; c.132delC; c.134C>A; c.136_140delGCTCA; c.14_23dupGAACCGATCC; c.152G>A; c.158C>A; c.158C>A; c.160C>T; c.163G>T; c.164delG; c.180delG; c.189dupG; c.18delC; c.197C>A; c.199C>T; c.1A>G; c.203A>C; c.207_214delCCTCTCA; c.220_221delCT; c.220_221insG; c.221T>C; c.238C>T; c.252+1G>A; c.253A>G; c.25C>T; c.265T>C; c.255T>G; c.285T>G; c.289_291delAAC; c.289A>G; c.290A>G; c.290G>A; c.374dupA; c.337G>A; c.341A>T; c.350T>C; c.354A>C; c.397C>T; c.388A>G; c.328+2T>C; c.329-2A>C; c.329G>A; c.334dupA; c.337G>A; c.341A>T; c.350T>C; c.354A>C; c.394C>T; c.386C>A; c.398_399dupCC; c.400deT]; c.404C>G; c.404C>T; c.410dupT; c.413C>T; c.416T>C; c.41delCinsTT; c.424A>G; c.425T>A; c.425T>C; c.428C>T; c.426C>T; c.410dupT; c.413C>T; c.418G>C; c.434CA; c.507>C; c.508-1A; c.425T>C; c.428C>T; c.440C>G; c.412C>T; c.443G>A; c.445dupG; c.4486>C; c.4352T>C; c.460T>C; c.508-1A; c.509T>C; c.5512T>C; c.5512>A; c.552C>A; c.554C>A; c.556C>A; c.526C>T; c.556C>A; c.51_564+9delCCAGGTAAGGGTG; c.562C>T; c.553A>G; c.5541+1G>A; c.564C>A; c.556C>T; c.556C>A; c.561_564+9delCCAGCAG; c.558T>C; c.557C>A; c.650T>C; c.584T>C; c.593T>C; c.594T>C; c.680T>C; c.688T>C; c.657C>T; c.553A>G; c.540T>C; c.77G>A; c.580T>C; c.584T>C; c.593T>C; c.594T>G; c.595C>A; c.598delC; c.601C>T; c.612A>G; c.575C>A; c.580T>C; c.584T>C; c.593T>C; c.594T>G; c.595C>A; c.598delC; c.601C>T; c.612A>G; c.587C>T; c.584T>C; c.593C>A; c.507C>A; c.507C>A; c.507C>A; c.507C>A; c.507C>A; c.508T>C; c.587T>C; c.593C>A; c.596C>A; c.697G>C; c.71_72ins
<i>GJB2</i> NM_004004.5	c.487A>C; c.176_191del16; c23+1G>A; c23G>T; c.290dupA; c.298C>T; c.365A>T; c22-2A>C; c.101T>C; c.101T>G; c.109G>A; c.109G>T; c.110T>C; c.119C>A; c.119C>G; c.11delG; c.125_127delAGG; c.130_131delTG; c.131G>A; c.131G>C; c.132G>A; c.132G>C; c.134delG; c.134G>A; c.136G>A; c.137_141delATGAG; c.139G>T; c.148G>A; c.148G>T; c.158G>A; c.158G>A; c.162C>A; c.164C>A; c.167delT; c.169C>T; c.172C>G; c.172C>T; c.175G>A; c.175G>C; c.176G>A; c.176G>C; c.193T>C; c.194A>G; c.195C>G; c.196G>C; c.196G>T; c.19C>T; c.1A>G; c.235delC; c.238C>T; c.230A>C; c.23C>T; c.224G>A; c.227T>C; c.229T>C; c.230G>A; c.231G>A; c.232dupG; c.235delC; c.238C>T; c.239A>C; c.23C>T; c.241C>G; c.244A>G; c.246C>G; c.250G>A; c.250G>C; c.250G>T; c.250G>T; c.257C>G; c.257delC; c.269dupT; c.269T>C; c.279G>A; c.280_284dupCACGT; c.283G>A; c.27T>C; c.27PG; c.370C>T; c.37G>A; c.385G>T; c.389G>C; c.400T>C; c.402AelG; c.49aCA; c.40A>G; c.416G>A; c.426C>A; c.427C>T; c.428G>A; c.439G>A; c.444A>C; c.45C>A; c.455T>A; c.474C>G; c.49_50delTC; c.506G>A; c.508_511dupAACG; c.50C>T; c.533T>C; c.551G>A; c.551G>A; c.51G>A; c.551G>A; c.551G>A; c.551G>A; c.551G>A; c.550A>G; c.557_575delCA; c.5533A>C; c.532_633delGT; c.632_633delGT; c.632G>A; c.645delT; c.647_650delGATA; c.668_671delAAAA; c.66G>T; c.71G>A; c.72G>A; c.617A>G; c.632_633delGT; c.632G>A; c.645delT; c.647_650delGATA; c.688_671delAAAA; c.66G>T; c.71G>A; c.72G>A; c.85_87delTTC; c.94C>A; c.49C>T; c.95G>A; c.695G>T; c.290dupA; c.298C>T; c.298delC; c.299_300delAT; c.294A=335delAA; c.338_341dupGTGA; c.313_326delAAGTTCATCAAGAGG; c.326A>T; c.358_360delGAG; c.365A>T.



Update of Septembe	1 ZUZ4
	c.485dupA; c.443delC; c.383_384delTA; c.263C>T; c.261dupA; c.169C>T; c.119C>T; c.110T>A; c.31G>A; c.14C>T; c.148G>C; c.487delC; c.346A>T; c.322C>T.
HEXA* NM_001318825.2	c.569A>G; c.254-1G>C; c.1121dupT; c.1283_1284delCT; c.1019+1G>A; c.1010delT; c.1019+3A>G; c.1020G>A; c.1076_1079delTCAA; c.1106+1G>A; c.1106+1G>T; c.1154A>C; c.1156delG; c.1173delA; c.1175_1179delTAAAG; c.1183C>T; c.1201C>T; c.1202_1204delAGGinsT; c.1209G>A; c.1210C>T; c.1211G>C; c.1216delG; c.1247_1248delAAinsG; c.1292G>A; c.1293G>C; c.1307_1310dupTATC; c.1308_1311dupATCC; c.1311_1312insTATC; c.1335C>G; c.1338C>T; c.1340_1341delTA; c.1363+1G>A; c.1382delC; c.139_140delCAinsT; c.1393G>A; c.1393G>C; c.139C>T; c.1418A>T; c.1452_1453delCT; c.1454+1G>C; c.1454+1G>T; c.1454G>A; c.1455-1G>T; c.1455G>C; c.1465G>A; c.1477G>A; c.1477G>T; c.1487G>A; c.1528C>T; c.1529G>A; c.1532delT; c.1535C>G; c.1543C>T; c.1543delC; c.1544G>A; c.1559+1G>T; c.1559+2T>C; c.155C>A; c.1561C>T; c.1570C>T; c.1582dupC; c.173G>A; c.187G>T; c.196C>T; c.233G>A; c.253+1G>A; c.254-1G>C; c.254-2A>G; c.309dupG; c.343_346dupTGTA; c.349C>T; c.373G>A; c.379+1G>A; c.379+1G>C; c.379+1G>T; c.380A>G; c.413T>G; c.430delT; c.442C>T; c.446-2A>G; c.455delC; c.458_459delTT; c.459delT; c.463C>T; c.566G>A; c.566G>T; c.571C>G; c.573C>G; c.570dupA; c.584_58delCT; c.542G>A; c.604+1G>T; c.649delG; c.649G>C; c.662C>T; c.664_67delTTCC; c.65T>C; c.670T>C; c.705+1G>A; c.742C>T; c.751_752inST; c.772C>T; c.781G>A; c.782G>A; c.787C>T; c.838G>C; c.8391-1G>A; c.839+1G>A; c.838+1G>C; c.838G>A; c.838G>C; c.839-1G>C; c.639G <t.< td=""></t.<>
<i>EMD</i> NM 000117.2	c.980dupA, c.995_997delGAG, c.997G>A, c.997G>1. c.101dupA; c.103G>T; c.123C>A; c.12C>A; c.12C>G; c.130C>T; c.135dupG; c.153dupC; c.16delG; c.177_178delTA; c.184dupT; c.187+1G>T; c.1A>G; c.217_218dupAT; c.239_240insT; c.251_255delTCTAC; c.265+2T>A; c.266-2A>G; c.284_298delATGAAGAGAGCTACT; c.355C>T; c.3G>A; c.419T>A; c.430G>T; c.450-2A>G; c.468_471delCCGG; c.475_476delAG; c.484C>T; c.512C>A; c.547C>A; c.548C>A; c.581_582delCA; c.600G>A; c.607delC; c.60delC; c.619delC; c.621delG; c.640_644dupGGGGC; c.650_654dupTGGGC; c.674_678delTCTGG; c.703_704insA; c.77dupT; c.82+1G>A; c.82+1G>T; c.82G>A; c.83-2A>C; c.83-2A>G.
GLA NM_000169.2	C1017_1027delGTGGGAACGAC; C.1018T>C; C.1019_1020insA; C.101A>G; C.1020G>A; C.1021G>A; C.1021G>T; C.1023A>C; C.1023delA; C.1024C>G; C.1024C>T; C.1025G>A; C.1031_1034dupTCT; C.1033_1034detTC; C.1037delG; C.1040dupT; C.1042G>C; C.1045T>C; C.1046G>A; C.1055_1056delCT; C.1072_1074delGAG; C.1072G>A; C.1072G>T; C.1077delT; C.107T>G; C.1081G>A; C.1081G>C; C.1085C>T; C.1087C>T; C.1087A; C.1095T>A; C.1095T>A; C.1072G>T; C.1077delT; C.107T>G; C.1081G>A; C.1081G>C; C.1085C>T; C.1087C>T; C.1087C>A; C.1095T>A; C.1095T>T; C.1286A>C; C.1225C>T; C.1228A>G; C.1222C>T; C.1226S>T; C.1216S+C; C.1241T>C; C.1244T>C; C.1246C1C; C.1246C>T; C.125T>C; C.126G>C; C.1276>A; C.1284_1287dbelCT; C.1285d>T; C.154T>C; C.156GCTGGCTGCTGCC; C.125T>C; C.126G>C; C.1276>A; C.1284_1287dbelCT; C.1285d>T; C.154T>C; C.190A>T; C.196>C; C.195-1G>C; C.195-1G>T; C.196OSC; C.19G>T; C.235G>T; C.242G>A; C.274G>T; C.274G>A; C.281G>A; C.290A>T; C.295C>T; C.295delC; C.295dupC; C.298A>T; C.2T>C; C.307G>T; C.31_43dupGGCTGCGCGCTTG; C.334C>T; C.334G>A; C.337T>A; C.337T>C; C.350T>G; C.351_5delGCTA; C.390FA>T; C.490G>T; C.496C>T; C.435G>A; C.335G>T; C.4247A>C; C.427G>C; C.476T>G; C.484delT; C.484T>C; C.485G>A; C.400G>T; C.413G>A; C.41T>C; C.422C>T; C.424T>C; C.427G>A; C.427G>C; C.3401G>T; C.436C>T; C.490G>T; C.490G>T; C.496C>T; C.431G>A; C.409C>T; C.424T>C; C.427G>C; C.476T>G; C.484delT; C.484T>C; C.680G>A; C.690C>T; C.436C>A; C.466G>A; C.690C>T; C.427C>C; C.500FA; C.501FA; C.580A>C; C.501FA; C.580A>C; C.501FA; C.580A>C; C.501FA; C.580A>C; C.5025A; C.601T>C; C.501G>A; C.504A>C; C.504A>C
NM_000402.4	c.292G>A; c.1054T>C; c.1093G>A; c.1172C>T; c.1178A>T; c.1179C>A; c.1192G>A; c.1243T>C; c.1246A>G; c.1249C>T; c.1268G>A; c.1270G>C; c.1282G>A; c.1319G>A; c.1406G>C; c.1408C>T; c.1429G>A; c.1437G>C; c.1450C>T; c.1466G>C; c.1466G>T; c.1468G>T; c.1478G>A; c.1555C>T; c.188T>C; c.221C>G; c.233T>C; c.299A>G; c.473T>C; c.494A>C; c.538G>A; c.577G>A; c.583A>G; c.607T>C; c.632A>T; c.653C>T; c.683G>A; c.683G>C; c.727G>T; c.770G>T; c.896G>A; c.934G>C; c.938A>T; c.961G>A
0TC NM_000531.6	c.77+2dup; c.77+3_77+6del; c.77+4A>C; c.77+5G>C; c.78-3C>G; c.125T>C; c.177dup; c.298+1delG; c.403G>C; c.429T>A; c.488T>A; c.505C>T; c.535C>G; c.674C>A; c.709del; c.709_712delinsCCT; c.717+3A>G; c.749dup; c.844del; c.860_861dupCA; c.1006-3C>G; c.1005+1G>T; c.1005+2T>C; c.1005G>A; c.1006-1G>A; c.1006G>T; c.1009G>C; c.1009G>T; c.1015G>A; c.1015G>C; c.1018T>C; c.1022T>C; c.1002G>A; c.1006-1G>A; c.1006G>T; c.1009G>C; c.1039C>A; c.1042C>T; c.1015G>C; c.1018T>C; c.1022T>C; c.1028C>A; c.1033T>C; c.1033T>G; c.1034A>G; c.1039C>A; c.1042C>T; c.1052delA; c.1061T>G; c.106C>T; c.115G>T; c.116G>C; c.118C>T; c.119G>A; c.122A>G; c.127C>T; c.128T>C; c.131C>T; c.133C>G; c.134T>C; c.140_141insG; c.140A>T; c.140delA; c.143_144delTT; c.143T>C; c.145A>C; c.148G>A; c.148G>T; c.154G>A; c.154G>T; c.155A>G; c.158T>C; c.158T>G; c.163T>G; c.167T>C; c.170T>A; c.174G>A; c.177dupA; c.179C>T; c.188T>C; c.1A>G; c.1A>T; c.200T>G; c.205C>T; c.214G>A; c.216+1delG; c.216+1G>A; c.216+1G>T; c.217-1G>A; c.217-2A>G; c.217-2dupA; c.227T>C; c.228A>C; c.231G>T; c.232C>T; c.236G>A; c.238A>G; c.240G>T; c.243_245delCTT; c.245T>G; c.247G>C; c.248G>A; c.254T>C; c.259G>A; c.264A>T; c.268A>G; c.269G>A; c.270T>G; c.271delA; c.274C>G; c.274C>T; c.275G>A; c.275G>C; c.275G>T; c.277A>G; c.284T>C; c.29_32delACAA; c.298+1_298+5delGTAAG; c.298+1G>A; c.298+1G>T; c.298+2T>G; c.298G>T;



SMN1	Exon 7 Deletion
FMR1	CGG Triplet Expansion
	<pre>c299G>A; c2T>C; c.305C>A; c.314G>T; c.316G>A; c.317G>A; c.317G>T; c.327T>A; c.330deT; c.335T>C; c.350A>G; c.350A>T; c.359_360deTG; c.364_365insTT; c.365A>G; c.376delG; c.377A>G; c.386+1G>A; c.386+1G>T; c.386+2T>C; c.386G>A; c.386G>T; c.337-1G>A; c.337-2A>C; c.387-2A>C; c.387-2A>T; c.300_392dupATT; c.391_397dupTTGTCTA; c.392T>C; c.394T>C; c.395C>T; c.3G>A; c.403delG; c.404C>A; c.407A>T; c.409G>A; c.416T>C c.418G>C; c.421C>G; c.421C>T; c.422G>C; c.425T>A; c.42deT; c.430A>T; c.437C>G; c.443T>C; c.443T>G; c.444G>T; c.4451deC; c.452T>G; c.452T>G; c.425C>T; c.460G>T; c.463G>T; c.464G>A; c.476C>G; c.443T>C; c.476T>C; c.479T>C; c.479T>C; c.479T>G; c.481A>G; c.482A>G; c.482A>G; c.484G>C; c.485G>A; c.488T>G; c.490T>C; c.491C>G; c.491C>T; c.493G>C; c.493G>T; c.494A>G; c.502C>T; c.501C>A; c.501C>G; c.503A>C; c.503A>G; c.504T>A; c.505C>G; c.506C>T; c.514A>T; c.516C>G; c.517C>G; c.520G>C; c.524A>G; c.524A>T; c.526T>C; c.527A>G; c.532_537delACGCTC; c.533C>T; c.536C>T; c.530deIA; c.540+1G>C; c.540+1G>T; c.540+2T>A; c.540+2T>C; c.540G>C; c.541-2A>G; c.542A>G; c.545A>T; c.547T>G; c.548A>G; c.522_553delG; c.562G>C; c.563G>T; c.568dupA; c.571C>T; c.576C>G; c.577T>C; c.577T>G; c.578G>A; c.583G>A; c.584G>C; c.586delG; c.586G>A; c.586G>T; c.587A>T; c.587A>T; c.59G>A; c.633G>T; c.640C>T; c.618A>G; c.620G>A; c.621C>A; c.626C>A; c.650C>G; c.613A>G; c.615SC>C; c.617T>A; c.617T>G; c.6186>C; c.620G>A; c.621C>A; c.650C>A; c.658C>G; c.659C>T; c.628A>C; c.634C>T; c.638C>T; c.700G>T; c.645dupT; c.646C>G; c.650C>A; c.658C>G; c.659C>T; c.663+1G>A; c.67C>T; c.608C>T; c.77G>A; c.717G>C; c.717G>C; c.717G>C; c.717G>C; c.717G>C; c.717G>C; c.717G>C; c.717G>C; c.77G>A; c.77G>C; c.717G>C; c.717G</pre>

* The region chr15:72668198-72668313 in HEXA gene cannot be detected