

Category	Disease / Disorder	# of Genes	Gene List
Blood	Afibrinogemia	3	FGA, FGB, FGG
Blood	Alpha Thalassemia	2	HBA1, HBA2
Blood	Bloom Syndrome	1	BLM
Blood	Coagulation Factor Deficiency Syndrome	24	F10, F11, F12, F13A1, F13B, F2, F5, F7, F8, F9, FGA, FGB, FGG, GGCX, GP1BA, KLKB1, KNG1, LMAN1, MCFD2, PLG, SERPINE1, SERPINF2, VKORC1, VWF
Blood	Congenital Sideroblastic Anemia	8	ABC7, ALAS2, GLRX5, PUS1, SLC19A2, SLC25A38, TRNT1, YARS2
Blood	Dyskeratosis Congenita	11	ACD, CTC1, DKC1, NHP2, NOP10, PARN, RTEL1, TERC, TERT, TINF2, WRAP53 BRCA2, BRIP1, ERCC4, FANCA, FANCB, FANCC, FANCD2, FANCE, FANCF, FANCG, FANCI, FANCL, FANCM, MAD2L2, PALB2, RAD51C, SLX4, XRCC2, BRCA1, RAD51, RFWD3, UBE2T
Blood	Fanconi Anemia	22	ENG, ACVRL1, GDF2, RASA1, EPHB4
Blood	Hereditary Hemorrhagic Telangiectasia	4	CALR, JAK2, MPL, SH2B3
Blood	Pseudohypoaldosteronism Type 2	10	CUL3, HSD11B2, KCNJ5, KLHL3, NR3C2, SCNN1A, SCNN1B, SCNN1G, WNK1, WNK4 F11, F13A1, F13B, F2, F5, F9, FGG, HRG, MPL, MTHFR, PLAT, PROC, PROS1, SERPINC1, SERPIND1, SERPINE1, THBD, VWF
Cancer	Beckwith-Wiedemann Syndrome	1	CDKN1C
Cancer	Breast Cancer	41	TP53, CHEK2, AKT1, ESR1, KRAS, PIK3CA, PTEN, BRCA1, BRCA2, PALB2, BRIP1, CDKN2A, ATM, BARD1, RAD51, RAD51C, RAD51B, PPM1D, CDH1, RAD54L, CHEK1, XRCC2, RAD50, MSH6, MLH1, MRE11, MSH2, NBN, RAD51D, STK11, POLD1, POLE, APC, MLH1, MSH2, NRAS, CHEK2, SMAD4, BRAF, TP53, MSH6, KRAS, POLE, PMS2, PTGS2, POLD1, PTEN
Cancer	Colorectal Cancer	15	BRCA1, BRCA2, CHEK2, EPCAM, MLH1, MSH2, MSH6, MUTHYH, PMS2, POLD1, PTEN, TP53
Cancer	Endometrial Cancer	12	APC, BMPR1A, CDH1, CTNNNA1, EPCAM, KIT, MLH1, MSH2, MSH6, NF1, PDGFRA, PMS2, SDHA, SDHB, SDHC, SDHD, SMAD4, STK11, TP53
Cancer	Gastric Cancer	19	ATM, BLM, NRAS, BRAF, MSH6, JAK2, WT1, GATA2 KRAS, MLH1, MSH2, CEBPA, DNMT3A, FLT3, IDH1, IDH2 KIT, NPM1, TP53, RUNX1, NBN, ASXL1, RNF19A, HRAS
Cancer	Leukemia	28	CBL, EPCAM, TIGAR, CBFA2T2
Cancer	Lung Carcinoma	5	KRAS, BRAF, EGFR, TP53, AIK BAP1, BRCA2, CDK4, CDKN2A, CHEK2, MC1R, MITF, MUTHYH, POT1, PTEN, RB1,
Cancer	Melanoma Cancer	14	SLC45A2, TP53, TYR
Cancer	Retinoblastoma	1	RB1
Cardiology	Cardiomyopathy	86	DMD, MYBPC3, TNNT2, PLN, TNNI3, DES, SGCD, EMD, MYH7 PKP2, DSP, TAZ, TTR, LAMP2, PRKAG2, TTN, CRYAB, VCL, CSRP3 ACTC1, DSG2, DSC2, TPM1, MYL2, GLA, RYR2, RBM20, NEYN, MYPN, TMEM43, JUP, MYL3, LDB3, JPH2, ABCC9, SCN5A, MYH6, GAA, SLC22A5, CAV3, TNNC1, PTPN11, FKTN, TMEM70, ANKRD1, MAP2K1, CASQ2, ACTN2, RAF1, RIT1, TCAP, SOS1, MYOZ2, NRAS, KRAS, DTNA, HRAS, MAP2K2, GATA1, BRAF, NEBL, PDILIM3, FLNC, FXN, LMNA, FHL1, NPPA, CPT2, KCNQ1, AGL, BAG3, MYLK2, SCN1B, ILK, GATA4, NKX2-5, EYA4, MTO1, CTNNNA3, ACADVL, CALR3
Jaw	Cherubism	1	SH3BP2
Jaw	Cleft Palate	142	SATB2, IRF6, COL2A1, NEDD4L, MSX1, TBX22, FOXE1, TBX1, FGFR1, TP63, MEIS2, FGFR2, SOX9, COL11A2, KIF7, HOXA2, COL11A1, COL9A2, COL9A3, FGFR3, COL9A1, FGF9, FGF8, PTCH1, TGDS, CASK RPS26, TGFB3, BMP2, SUMO1, FGF10, RYK, TYMS, MTR, TGFB1, BNC2 DLG1, PGM1, ARHGAP29, EGF, PDGFRA, CTNNND1, FZD4, MYC, ACBD5, TGFB2, ESRP2, PLEKHA5, SLC19A1, BHMT2, SPRY2, MNT, NOS3, CHUK, CBFB, FGF3, FGF7, MTHFS, PLEKH4, GRHL3 SOX11, NECTIN1 (PVRL1), GLI2, CHD7, PHF8, FGD1, SMC1A, TFAP2A MAFB, SMAD3, PAX3, VAX1, TCOF1, KDM6A, WNT5A, WDR11 NOTCH2, FAM20C, NEUROD2, INPP5E, MYH3, MYO1, NBN, SPRY4, MASP1, NEB, TBC1D24, EVC2, RIPK4, PAX7, CDON, COLEC11, ALX1, WDR35, KMT2D, FRAS1 PIEZ02, XYLT1, SHH, PORCN, SIX3, DHODH, POLR1C, DHC7, POLR1D, ESCO2, NTN1, EFTUD2, EYA1, FREM2, DEAF1, SF3B4, SEMA3E, INPPL1, ANOS1, MID1, MSX2, STAC3, FLNA, FLNB, SPECC1L, GLI3, GJA1, PAX9, CRISPLD2, BMP4, CDH1, CDKN1C, GREM1, IGF2, FOXF2, MN1, GREM1, MTHFR, IFT88, CLPTM1L, TGFB2, SMAD2, JAG2
Jaw	Pierre Robin Syndrome	7	SOX9, EIF4A3, COL2A1, COL11A2
Jaw	Retrognathia	2	PRRX1, FGFR2

Neurology	Alzheimers & Dementia	A2M,ABCA7,ACE,ACHE,ANKRD55,,BAX,BCHE,BCL2,APOC1,APP,ARC,ATP5A1,BACE1,BDNF,BLMH,BMPER,CACNA1G,CALM1,CHRN82,CLU,CD2AP,DMXL1,CRADD,CRH,CSMD1,CVCS,CYP2D6,CYP46A1,DCHS2,DHCR24,DPYSL2,ENO1,ESR1,EXOC4,F2,GAB2,GABRG3,GPC6,GSK3B,HFE,HMOX1,IDE,IGF1,IGF1R,IGF2,IGF2R,IL19,IL1BINSR,LEP,LRP1,MTHFD1L,MTHFR,MAOB,MAPT,MEGF10,MME,MMP12,MPO,MS4A3,MS4A6A,NC51,NCSTN,NDUFaf6,NKAIN2,NOS3,NPY,PLAU,PCDH11X,PDE7B,PICALM,PIN1,PPARG,PPP1R3B,PSEN1,PSEN2,PTGS2,PYY,RELN,SLC2A4,SLC2A4,SOD2,SORL1,SPPL2A,SQSTM1,VEGFA,TF,TFAM,TGM6,TNF,TOMM40,TPI1,TREM2,APOE,PRNP,GRN,CSF1R,VCP,107,EIF4AG1,C9orf72,SNCA,TYROBP,ITM2B,SGSM3,GJA1,GBA,AGRN
Neurology	Anxiety Disorders	ADORA2A,APP,BDNF,CARTPT,CAT,CCKBR,COMT,CHRN82,CNR1,CRH,CRHR1,CRP,DRD2,EOMES,DNMT1,GPC6,,GRM8, GLO1,GNB1,HTR1A,HTR2A,HTR7,IFNA2,NKAIN2,NPY,NPY1R,PKP1,OXT,PRL,34,RAI1,SERPINA1,SLC6A3,SLC6A4,TNF
Neurology	Autism	CHD8,CNTNAP2,SHANK3,ADSL,NRXN2,NLGN3,NRXN1,BRSK2,GABRB3,PQBP1,SCN1A,MEF2C,PTCHD1,SHANK2,RELN,PTEN,NLGN4X,GRIN2B,TSC2,FOXP1,IL1RAPL1,DPP6,RAI1,DPYD,CHD2,ANKRD11,NRXN3,TSHZ3,TRIP12,DNMT3A,SIN3A,GLRA2,ZMYND11,PCDH9,DPP10,LAMC3,CIC,FMR1,MED13,MET,SLC6A4,SLC16A2,SOX5,KMT2E,CTTNBP2,TBR1,TSC1,SYN1,NBEA,SLC9A9,ARID1B,CREBBP,BCKDK,WDFY3,POGZ,DEAF1,EHMT1,MED13L,STXBP1,MED12,SLC9A6,EP300,PTPN11,PPP2R5D,IQSEC2,GATM,KCNB1,MEIS2,NDP,PRR12,RAD21,ALDH5A1,IL6,DSCAM,GAMT,ALDH5A1,MECP2,NF1,KMT2A,RBOFOX1,SLC9A6,EP300,PTPN11,PPP2R5D,MTOR,KCNB1,MEIS2,NDP,PRR12,,RAD21,ALDH5A1,DSCAM,ADNP,MBDS,KIRREL3,FOXP2,DYRK1A,NLGN1,CACNA1C,TBL1XR1,GRIN2A,HOXA1,CHD7,CASK,SYNGAP1,GRIP1,ARHGEF9,AUTS2,CNTN6,GLO1,ANK3,SETD2,PAFAH1B1,MAGE2,CC2D1A,SETD5,PCDH19,PCDH10,CDKL5,TCF4,KATNAL2,VPS13B,DMD,ZNF292,ASTN2,HNRNPU,NEXMIF,NR4A2,KMT2C,RORA,RPL10,TCF20,KDM5C,CACNA1H,PTCHD1-AS,WAC,BARF,PDE10A,RAB39B,CNTNAPS,BCL11A,CNOT3,CTNND2,SETBP1,ARX,DHCR7,SBNO2,TNRC6B,SATB2,GRPR,ANK2,HRAS,L1CAM,RERE,KMT5B,POMGNT1,ZNF407,ASH1L,PSMD12,ATP10A,TAOK1,ZNF462,SCN8A,NSD1,UPF3B,172,SLC6A1,SNRPN,SPAST,MBOAT7,DOCK4,CUL3
Neurology	Bipolar Disorder	ADRBK2,AKR1C4,ANK3,BDNF,CACNA1C,COMT,CPLX2,CFAP57,CTSF,DRD1,DRD5,GRK2,GRM7,GSK3B,IT,IH1,ITK,HTR2A,MTHFR,NCAN,NDUFV2,NFIA,NR3C1,NTNG1,NTRK1,NTRK2,PLCE1,PALB2,PDE4B,POMC,SLC100B,RELN,RXRG,SERPINA1,SLC6A3,SLC6A4,SPTL49,C3,KBPI,SYNE1,TAC1,TACR1,TCF7L2,TENM4,TRPC3,TRPM2,TSHB,SNAP25
Neurology	Down Syndrome (Trisomy 21)	MTHFR,DYRK1A,GATA1,MTR,APP,RCAN1,SOD1,SLC19A1,RUNX1,S100B,SIM2,KCNJ6,DSCAM,ERG,KCNJ15,BRWD1,SYNJ1,HLCS,CBR1,IL10RB,IFNAR1,GRIK1,GART,VIP,RIPK4,MX1,TP53,STAG2,RAD21,NTF3,NRAS,MRAP,KCNE2,KCNE1,KANSL1,IFNGR2,IFNAR2,EZH2,DCAF7,CXCL8,CTCF,44,CLDN14,CBR3,CALCA,CA2,BCS1L,ACAD9,TUFM,SLC4A4,ATP6VOA4,PDP1,ISCU,PDHX,DLAT,ATP6V1B1,17,PDHA1,MRPS16,RRM2B,PLAT,DNM1L,SLC4A4
Nutrigenomics	Acid-Base Imbalance (Acidosis)	3,DHFR,MTHFR,SLC46A1,
Nutrigenomics	Avitaminosis - Folic Acid Deficiency	5,CBS,MTTR,CBSL,MTHFR,MMACHC
Nutrigenomics	Avitaminosis - Homocystinuria	2,FXYD2,TRPM6
Nutrigenomics	Avitaminosis - Magnesium Deficiency	3,SOD1,CAT,GSR
Nutrigenomics	Avitaminosis - Protein Deficiency	1,SLC52A1
Nutrigenomics	Avitaminosis - Riboflavin Deficiency	4,TDO2,SI,UGT1A1,ACSL1
Nutrigenomics	Avitaminosis - Starvation	3,SERPINA1,TKT,SLC19A2
Nutrigenomics	Avitaminosis - Thiamine Deficiency	6,BCO1,RBP4,TGM1,RAPP1,LRAT,BMP4
Nutrigenomics	Avitaminosis - Vitamin A Deficiency	3,ABCD4,CUBN,CBLIF
Nutrigenomics	Avitaminosis - Vitamin B-12 Deficiency	4,SLC39A13,SLC39A4,SLC30A2,SLC39A2
Nutrigenomics	Avitaminosis - Zinc Deficiency	3,CST3,ITM2B,APP
Nutrigenomics	Brain Disease Metabolism - Cerebral Amyloid Angiopathy	3,GALT,GALK1,GALE
Nutrigenomics	Brain Disease Metabolism - Galactosemias	AHCY,A2M,ACTA2,ANKS1B,ANXA5,ASMT,ATP7B,BHMT,COMM1,CP,CXCL8,HAMP,H26,GF,IL10,IL6,LOX,LOXL2,MET,PPP3CA,SMAD2,SDHAF2,STAT3,TGFB1,TIMP1,TNF,SNCA8,ABCD1,IFNG,SOD2,HMOX1,PEX26,PEX13,ABC6,ACOX1
Nutrigenomics	Brain Disease Metabolism - Hepatolenticular Degenerative	2,GFAP,NDUFV1
Nutrigenomics	Brain Disease Metabolism - Hereditary Central Nervous S	1,ASPA
Nutrigenomics	Brain Disease Metabolism - Hereditary Central Nervous S	2,GALC,PSAP
Nutrigenomics	Brain Disease Metabolism - Hereditary Central Nervous S	2,ARSA,PSAP
Nutrigenomics	Brain Disease Metabolism - Hereditary Central Nervous S	2,PLP1,LMBN1

Nutrigenomics	Brain Disease Metabolism - Hyperlysine	2 AASS, NADK2
		BCS1L, COX15, DLD, ECHS1, FOXRED1, IARS2, MTFMT, NARS2, NDUFA2, NDUFA2F, ND, UFA5, NDUFAF6, NDUFS2, NDUFS3, NDUFS4, NDUFS7, NDUFS8, NDUFV1, POLG, SCO2, SDHA, SURF1, TACO1, LRPPRC, NDUFA10, NDUFA12, NDUFA9, UQCRCQ, TTC19, TPK1, TACO1, SUCLG1, SLC25A19, SLC19A3, SDHAF1, SDHA, SCO2, PDSS2, PDP1, PDHX, PDHB, PDHA1, NDUFV2, NDUFV1, NDUFS7, NDUFS6, NDUFS2, NDUFS1, NDUFAF3, NDUFA1, 56 MTFMT, FARS2, ETHE1, COX10, C12orf65,
Nutrigenomics	Brain Disease Metabolism - Leigh Disease	1 HPRT1
Nutrigenomics	Brain Disease Metabolism - Lesch-Nyhan Syndrome	8 BOLA3, GLDC, AMT, GCSH, SLC6A9, GLRX5, LIAS, LIPT1,
		ADRA1A, AIFM1, ACE, ACOX1, ACSL1, BAX, BCL2, BCL2L1, ATF3, ATP2A2, ATP2A3, BDKRB1, CAT, CAV3, CHRM2, CPT1A, CPT1B, CYBA, CYBB, CYP1A1, EDN1, ESRRα, FAS, FOXO3, GCK, GPAM, GPD2, GPX1, GSR, HK1, HMOX1, HSD11B1, IAPP, ICAM1, ID1, IFNG, IGF1, IL1B, IL6, IRS, IRS1, LEPR, KCNJ11, MFGE8, MMP2, MMP9, MPO, NEUROD1, NOS2, NOS3, NQO1, PKLR, PAX6, PCK1, PCSK2, PDX1, PFKM, PPARA, PPARG, PPARGC1A, PRKCA, PRKCD, PTGS2, S1PR2, RELA, REN, SERPINE1, SIRT1, SLC2A2, SLC2A4, SOD1, SOD2, SREBF1, VEGFA, STS, TGFB1, TI
Nutrigenomics	Glucose Metabolism Disorder - Diabetes Mellitus	83 MP1, TIMP2, TNF, TNFRSF1A, TP53, UCP2, SNAP25
Nutrigenomics	Glucose Metabolism Disorder - Wolfram Syndrome	2 WFS1, CISD2
Nutrigenomics	Glucose Metabolism Disorder - Diabetes Complications -	20 CRP, GAD2, ALB, MYSM1, SIRT1, ASS1, BDKRB1, RBFOX1, AKR1B1, SERPINF1
Nutrigenomics	Glucose Metabolism Disorder - Diabetes Complications -	9 ATP2A2, APOA1, KLK1, SPP1, AGTR2, RYR2, SLC25A4, IGF1, TNF, ACE, TGFB1, ALB, CCL2, TGFB1, SERPINE1, NFE2L2, NOS3, CNDP1, VEGFA, ACE2, SOD2, TGFBR2, ERBB4, TXNIP, COL4A1, GA56, KDR, KLK1, RELA, SORBS1, AFF, AXL, TINAG, 28 VDAC1, AGTR1, PPARG, AGER
Nutrigenomics	Glucose Metabolism Disorder - Diabetes Complications -	12 TLR4, TGFB1, INSR, CAT, HGF, MMP9, NTF3, CHRM2, GRM5, MME, MMP2, SGK1
Nutrigenomics	Glucose Metabolism Disorder - Diabetes Complications -	1 DIS3L2
Nutrigenomics	Hepatic Encephalopathies	8 GLUL, GC
Nutrigenomics	HIV Wasting Syndrome	4 IL1A, IL1B, IL6, TNF
Nutrigenomics	Iron Metabolism Disorder - Anemia (Iron Deficiency)	4 TMPRSS6, SLC11A2, TFRC, SOD1
Nutrigenomics	Iron Metabolism Disorder - Hemochromatosis	11 TFR2, SLC40A1, HAMP, HFE, TNF, SLC11A2, CP, BMP2, BMP6, AKR1D1, HJV (HFE2)
Nutrigenomics	Iron Metabolism Disorder - Hemosiderosis	2 BCS1L, CP
Nutrigenomics	Malabsorption Syndrome - Celiac Disease	HLA-DQA1, BACH2, ETS1, HLA-DQB1, CTLA4, MYO9B, TGM2, IL21, KIAA1109, ICOS, SH2B3, TAGAP, LPP, ATXN2, IL18R1, CD247, ARHGAP31, CCR4, NFIA, PLEK, PTPN2, 24 RUNX3, WNT3, NKAIN2
Nutrigenomics	Malabsorption Syndrome - Hyperhomocysteinemia	MTRR, CBS, MTHFR, CTH, PON1, CASP1, DES, GNMT, NPHS1, PYCARD, SLC46A1, 13 TNF, MMACHC
Nutrigenomics	Malabsorption Syndrome - Lactose Intolerance	2 LCT, MCM6
Nutrigenomics	Malabsorption Syndrome - Steatorrhea	1 SLC10A2
Nutrigenomics	Maple Syrup Urine Disease	6 DBT, BC KDHB, BC KDHA, BCAT2, DLD, PPM1K
		ABCA1, ABCB11, APOA5, APOB, APOC3, CAMK2B, CCL2, CETP, CRP, FADS2, FTO, G6PC2, GALNT2, GCKR, HMG A1, HTR2C, IL18, IL6, LBP, LEP, LPL, MTTP, MLXIPL, NEIL1, NOS3, NR1H3, NR1I2, NR1I3, PON1, PPARA, PPARG, RETN, SHBG, SIRT1, TCF7L2, TFA 37 P2B, TOMM40, TRIB3
Nutrigenomics	Metabolic Syndrome	10 NDS, ND1, COX2, IL1A, IL1B, NDUFS1, SOD1, SOD2, YARS2, PUS1
Nutrigenomics	Metochondrial Encephalomyopathies - MELAS Syndrome	4 IL1A, IL1B, TRNL1, TRNK
		ADH1B, ADCY9, AGRP, ADRB2, AKR1C3, AKT1, ACACB, ACADM, ACE, ACLY, ACPS, ACSL1, BCHE, AQP7, ALDH6A1, BDNF, BMP2, CSAP1, CARTP, CPB2, CIDEA, CNR1, COL4A1, CRP, CYB5A, CYCS, CYP26B1, DCC, DCXR, DRD2, ECHS1, EFNB1, ENPP1, EP300, ESR1, ETFDH, ETV5, F2, FAAH, DPYD, GFPT1, GH1, GHRL, FARS2, GIPR, FASN, FOXO3, FTL, FTO, GCG, GCH1, GPX1, HADH, HK2, HMOX1, GLUL, GNAS, GNAT2, GNB3, ITPR3, HSD11B1, HTR2A, HTR2C, ICAM1, IL1B, IL6, INPP5E, IRS1, KCNMA1, LBP, LDLR, LEP, SNRPN, UQCRC2, UCP3, UCP2, UCP1, TNFRSF1B, TRPV1, TRIM66, TNF, TMEM18, TFRC, TFAP2B, TBCE, LEPR, LIPC, LIPE, LPL, MTCH2, MTNR1B, MAGEL2, MC3R, MC4R, MMP9, NAMPT, NDN, NEGR1, NEIL1, NHLH2, NPC1, NPY, NPY1R, NQO1, NR0B2, NR1I2, NR1I3, NR3C1, NRXN3, TBC1D1, SCLCA8, NTRK2, STS, WWOX, WDPPC, PLIN1, PACS1, PARP1, PAX5, PCDH9, PCK1, PCSK1, PHF6, POMC, PPARA, PPARD, PPARG, PPARGC1A, PPARGC1B, PRKCH, PY, SAT1, RAI1, RPTOR, SERPINE1, SLC8A1, SH2B1, SIRT1, SIRT3, SLC22A1, SDCCAG8, SOD1, SOD2, VLDDR, VPS13B, AGMO, ABO, ACKR1, ANO10, UGT2B7, TUBGCP6, TSEN34, AUTS2, CCR3, CACNA2D1, TF, TENM4, SPTB, SCNN1A, CACNB2, CHL1, CLEC16A, CSMD1, WHRN (DFNB31), DSCAM, ERBB3, GPC5, GPC6, HDCA8, ITPR1, IGF2, KLKB1, NOTCH4, MMUT, PCSK2, PRM1, SHANK2, SLC29A3, SLC4A1, ADCY3, ALMS1, ARL6, BBS1, BBS10, BBS12, BBS2, BBS4, BBS5, BBS7, BBS9, CEP19, CEP290, CPE, CUL4B, GNAS, KSR2, MKKS, MKS1, NR0B2, NTRK2, PHIP, SIM1, TRIM32, TTC8, 205 TUB,
Nutrigenomics	Obesity	205 TUB,