**پانل بیماری نوروژنیک**

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| **ردیف** | **نام بیماری** | **تعداد ژن** | **ژن های مورد بررسی** |
| 1 | Parkinson’s disease, autosomal dominant | 10 | CHCHD2, DNAJC13, EIF4G1, GBA, HTRA2, LRRK2, PRKAR1B, RAB29, SNCA, VPS35 |
| 2 | Parkinson’s disease, autosomal recessive | 11 | ATP13A2, DNAJC6, FBXO7, PARK2, PARK7, PINK1, PLA2G6, PODXL, SLC30A10, SYNJ1, VPS13C |
| 3 | Atypical Parkinson’s Disease | 21 | ATP13A2, ATP1A3, ATP6AP2, COMT, DCTN1, DNAJC6, FBXO7, FMR1, FTL, GCH1, GRN, MAPT, PDE8B, PLA2G6, POLG, RAB39B, SLC30A10, SPG11, SYNJ1, TH, ZFYVE26SCA2, SCA3, SCA17, SCA6, C9orf72 repeat analyses optional |
| 4 | Dystonia-Parkinsonism | 9 | ATP1A3, GCH1, PLA2G6, PRKRA, SLC30A10, SLC6A3, SPR, TAF1, TH |
| 5 | Parkinson’s Disease all | 46 | ASNA1, ATP13A2, ATP1A3, ATP6AP2, C19orf12, CHCHD2, COMT, DCTN1, DNAJC13, DNAJC6, EIF4G1, FBXO7, FMR1, FTL, GBA, GCH1, GRN, HTRA2, LRRK2, MAPT, PANK2, PARK2, PARK7, PDE8B, PDE10A, PINK1, PLA2G6, PODXL, POLG, PRKAR1B, PRKRA, PTEN, RAB29, RAB39B, SLC30A10, SLC6A3, SNCA, SPG11, SPR, SYNJ1, TAF1, TENM4, TH, VPS13C, VPS35, ZFYVE26 |
| 6 | Primary Torsion Dystonia | 9 | ANO3, ATM, CIZ1, COL6A3, GNAL, HPCA, THAP1, TOR1A, TUBB4A |
| 7 | Dystonia Plus Syndrome | 14 | ATP1A3, BCAP31, COX20, FTL, GCH1, KIF1C, PRKRA, RELN, SGCE, SLC30A10, SPR, TAF1, TH, TUBB4A |
| 8 | Paroxysmal Dyskinesia  | 6 | ADCY5, KCNMA1, PNKD, PRRT2, SCN8A, SLC2A1 |
| 9 | Heredodegenerative Syndromes | 42 | ARFGEF2, ARSA, ARX, ATM, ATP13A2, ATP7A, ATP7B, AUH, C19orf12, CLN3, CSF1R, CYP27A1, DCTN1, DRD1, FBXO7, FOXG1, FTL, FUCA1, GCDH, HEPACAM, HEXA, HPRT1, MECP2, MLC1, NDUFS4, NPC1, NPC2, NUP62, PANK2, PARK2, PLA2G6, PLP1, SLC16A2, SLC25A15, SLC30A10, SLC6A3, SMPD1, SUCLA2, TAF1, TIMM8A, VPS13A, WDR45ATN1, SCA2, SCA3, SCA7, HTT, JPH3, SCA17 repeat analyses optional |
| 10 | Dystonia all | 56 | ACTB, ACY1, ADAR, ADCY5, ALS2, ANO3, ARSA, ARX, ATM, ATP1A3, ATP7A, ATP7B, AUH, BCAP31, CACNA1B, CIZ1, CLCN1, CLN3, COL6A3, COX20, CSF1R, CYP27A1, DCTN1, FTL, GCDH, GCH1, GNAL, HEXA, HPCA, KCNMA1, KCTD17, KIF1C, MECP2, MED20, MLC1, NPC1, NPC2, PANK2, PARK2, PLA2G6, PNKD, PRKRA, PRRT2, SGCE, SLC19A3, SLC25A15, SLC2A1, SLC30A10, SPR, TAF1, TH, THAP1, TIMM8A, TOR1A, TUBB4A, VPS13A |
| 11 | Neurodegeneration with Brain Ion Accumulation (NBIA) | 13 | ATP13A2, C19orf12, COASY, CP, DCAF17, FA2H, FTL, PANK2, PLA2G6, REPS1, SCP2, SLC25A42, WDR45 |
| 12 | Neuroacanthocytosis | 3 | JPH3 (repeat), PANK2, VPS13A, XK |
| 13 | Choreatic Movement Disorders | 13 | HTT (repeat), JPH3 (repeat), ADCY5, ARHGEF2, ATM, FRRS1L, FTL, GM2A, GNAO1, KCNA1, NKX2-1, OPA3, PDE10A, PRNP, RNF216ATN1, SCA1, SCA2, SCA3, SCA6, SCA7, C9orf72, SCA17 repeat analyses optional |
| 14 | Ataxia, autosomal dominant | 26 | ATN1, SCA1, SCA2, SCA3, SCA6, SCA7, SCA17 repeat analyses optionalAFG3L2, ATP1A3, BEAN1, CACNA1A, CACNA1G, CACNB4, CCDC88C, EEF2, ELOVL4, ELOVL5, FGF14, ITPR1, KCNA1, KCNC3, KCND3, NOP56, PDYN, PPP2R2B, PRKCG, SLC1A3, SPG7, SPTBN2, TGM6, TMEM240, TTBK2, VAMP1 |
| 15 | Ataxia, autosomal recessive and X-linked | 47 | FXN repeat analysis optionalABCB7, ADCK3, AFG3L2, ANO10, APTX, ATCAY, ATM, ATP2B3, ATP8A2, CA8, CP, CTSF, CWF19L1, DNAJC3, FXN, GOSR2, GRID2, GRM1, HEXA, HEXB, KIAA0226, KIF1C, MARS2, MRE11A, MTPAP, PEX10, PIK3R5, PLA2G6, PMPCA, PNKP, PRICKLE1, RNF216, SACS, SETX, SLC9A1, SNX14, SPG7, SPTBN2, STUB1, SYNE1, SYT14, TDP1, TPP1, TTPA, UBA5, VLDLR, WWOX |
| 16 | Ataxia differential diagnoses | 197 | AARS2, ABCB7, ABHD12, ACO2, ADCK3, AFG3L2, AHI1, ALDH5A1, ALG6, AMACR, ANO10, APTX, ARL13B, ARSA, ATCAY, ATM, ATP1A3, ATP2B3, ATP7B, ATP8A2, AUH, BEAN1, BSCL2, BTD, C10orf2, CA8, CACNA1A, CACNA1G, CACNB4, CC2D2A, CCDC88C, CEP290, CHCHD10, CLCN2, CLN5, CLN6, COQ2, COQ9, COX20, CP, CSTB, CTSF, CWF19L1, CYP27A1, DARS2, DLAT, DMXL2, DNAJC19, DNAJC3, DNAJC5, DNMT1, EEF2, EIF2B1, EIF2B2, EIF2B3, EIF2B4, EIF2B5, ELOVL4, ELOVL5, EPM2A, ERCC2, ERCC3, ERCC4, ERCC5, ERCC6, FASTKD2, FGF14, FLVCR1, FMR1, FOLR1, FXN, GALC, GBA, GBA2, GCDH, GFAP, GJB1, GLB1, GMPPB, GOSR2, GPR56, GRID2, GRM1, HCN1, HEXA, HEXB, INPP5E, ITPR1, KCNA1, KCNA2, KCNC1, KCNC3, KCND3, KCNJ10, KIAA0226, KIF1C, L2HGDH, LAMA1, LMNB2, MARS2, MRE11A, MTPAP, MTTP, NAGLU, NALCN, NDUFS7, NEU1, NHLRC1, NKX2-1, NOP56, NPC1, NPC2, NPHP1, NUBPL, OPA1, OPA3, PAX6, PCNA, PDHX, PDP1, PDSS1, PDSS2, PDYN, PEX10, PEX2, PEX7, PHYH, PIK3R5, PLA2G6, PMM2, PMPCA, PNKP, PNPLA6, POLG, POLH, POLR1C, POLR3A, POLR3B, PPP2R2B, PRICKLE1, PRKCG, PRPS1, PRRT2, PTRH2, RARS, RELN, RNASEH1, RNF170, RNF216, RPGRIP1L, RPIA, SACS, SCN2A, SCYL1, SETX, SIL1, SLC17A5, SLC19A3, SLC1A3, SLC52A2, SLC6A1, SLC9A1, SNAP25, SNX14, SPG7, SPR, SPTBN2, STUB1, SYNE1, SYT14, TDP1, TGM6, TMEM216, TMEM240, TMEM67, TPP1, TRAPPC11, TRNT1, TSEN54, TSFM, TTBK2, TTC19, TTPA, UBA5, UCHL1, UQCRQ, VAMP1, VLDLR, VRK1, VWA3B, WDR73, WDR81, WFS1, WNT1, WWOX, XPA, XPCFXN repeat analysis optionalATN1, SCA1, SCA2, SCA3, SCA6, SCA7, SCA17 repeat analyses optional |
| 17 | Frontotemporal dementia | 26 | C9orf72 (repeat), PSEN1 (MLPA), CHCHD10, CHMP2B, CSF1R, DCTN1, FUS, GRN, HNRNPA1, HNRNPA2B1, ITM2B, MAPT, MATR3, NOTCH3, OPTN, PRKAR1B, PRNP, PSEN1, PSEN2, SIGMAR1, SQSTM1, TARDBP, TBK1, TOMM40, TREM2, TUBA4A, UBQLN2, VCPSCA2 repeat analysis optional |
| 18 | Alzheimer’s disease | 10 | APP (MLPA), PSEN1 (MLPA), ABCA7, APOE, APP, CD33, MARK4, NLGN1, PSEN1,  PSEN2, TOMM40, VPS35SCA17 repeat analysis optional |
| 19 | Dementia all | 33 | C9orf72 (repeat), APP (MLPA), PSEN1 (MLPA), ABCA7, APOE, APP, CD33, CHCHD10, CHMP2B, CSF1R, DCTN1, FUS, GRN, HNRNPA1, HNRNPA2B1, ITM2B, MAPT, MARK4, MATR3, NLGN1, NOTCH3, OPTN, PRKAR1B, PRNP, PSEN1, PSEN2, SIGMAR1, SQSTM1, TARDBP, TBK1, TOMM40, TREM2, TUBA4A, UBQLN2, VCP, VPS35SCA2, SCA17 repeat analyses optional |
| 20 | Amyotrophic lateral sclerosis | 52 | C9orf72 (repeat), ALS2, ANG, ARHGEF28, ATXN2, CHCHD10, CHMP2B, CHRM1, DAO, DCTN1, DPP6, ELP3, ERBB4, EWSR1, FGGY, FIG4, FUS, GLE1, GRN, HFE, HNRNPA1, HNRNPA2B1, HNRNPD, ITPR2, MAPT, MATR3, NEFH, NEK1, OPTN, PARK7, PFN1, PON1, PON2, PON3, PRPH, SETX, SIGMAR1, SOD1, SPG11, SPG20, SQSTM1, SRCAP, SS18L1, TAF15, TARDBP, TBK1, TUBA4A, UBQLN2, UNC13A, VAPB, VCP, VEGFA, VPS54SCA1, SCA2 repeat analyses optional |
| 21 | Spinal Muscular Atrophy | 27 | AARS, ASAH1, ATP7A, BICD2, BSCL2, CHCHD10, DCTN1, DNAJB2, DYNC1H1, EXOSC3, EXOSC8, FBXO38, GARS, HEXA, HSPB1, HSPB3, HSPB8, IGHMBP2, LAS1L, PLEKHG5, REEP1, SCO2, SLC5A7, TRPV4, UBA1, VAPB, VRK1SMN1 deletion analysis as step-by-step analysis optional |
| 22 | Hereditary Spastic Paraplegia (HSP), autosomal dominant | 16 | ALDH18A1, ATL1, ATP2B4, BSCL2, CPT1C, HSPD1, KANK1, KIAA0196, KIF5A, NIPA1, REEP1, REEP2, RTN2, SLC33A1, SPAST, ZFYVE27 |
| 23 | Hereditary Spastic Paraplegia (HSP), autosomal recessive and X-linked | 44 | ABHD12, ALDH18A1, ALS2, AMPD2, AP4B1, AP4E1, AP4M1, AP4S1, AP5Z1, ARL6IP1, B4GALNT1, C12orf65, C19orf12, CCT5, CYP2U1, CYP7B1, DDHD1, DDHD2, ENTPD1, ERLIN2, FA2H, GAD1, GAN, GBA2, GJC2, HACE1, IBA57, KIF1A, KLC4, L1CAM, MAG, NT5C2, PLP1, PNPLA6, REEP2, SLC1A4, SPG11, SPG20, SPG21, SPG7, TECPR2, TFG, VPS37A, ZFYVE26 |
| 24 | Hereditary Spastic Paraplegia and differential diagnoses | 142 | ABCB7, ABCD1, ABHD12, ADD3, AFG3L2, AIMP1, ALDH18A1, ALS2, AMPD2, ANG, AP4B1, AP4E1, AP4M1, AP4S1, AP5Z1, ARG1, ARHGEF28, ARL6IP1, ARSI, ASAH1, ATL1, ATP2B4, ATP7A, AUH, B4GALNT1, BICD2, BSCL2, C12orf65, C19orf12, CCDC88C, CCT5, CHMP2B, CLCN2, COASY, CPT1C, CYP27A1, CYP2U1, CYP7B1, DARS2, DCTN1, DDHD1, DDHD2, DNM2, ELOVL4, ENTPD1, ERLIN1, ERLIN2, FA2H, FAM126A, FARS2, FIG4, FLRT1, FUS, GAD1, GALC, GAN, GARS, GBA, GBA2, GBE1, GCH1, GFAP, GJC2, GLB1, GRID2, HACE1, HEXA, HNRNPA1, HNRNPA2B1, HSPB1, HSPB3, HSPB8, HSPD1, IBA57, IGHMBP2, KANK1, KIAA0196, KIF1A, KIF1C, KIF5A, KLC4, L1CAM, LYST, MAG, MARS, MTHFR, MTPAP, NDUFV1, NEFH, NIPA1, NT5C2, OPA1, OPA3, OPTN, PANK2, PDYN, PFN1, PGAP1, PLA2G6, PLEKHG5, PLP1, PNPLA6, PQBP1, PRPH, PSEN1, RAB3GAP1, RAB3GAP2, REEP1, REEP2, RTN2, SACS, SETX, SIGMAR1, SLC16A2, SLC1A4, SLC25A15, SLC33A1, SOD1, SOX10, SPAST, SPG7, SPG11, SPG20, SPG21, SPR, STUB1, TARDBP, TECPR2, TFG, TH, TRPV4, TUBB4A, UBQLN2, VAMP1, VAPB, VCP, VEGFA, VPS37A, VPS54, VRK1, ZFYVE26, ZFYVE27 |
| 25 | Neuronal Ceroid Lipofuscinosis | 13 | ATP13A2, CLN3, CLN5, CLN6, CLN8, CTSD, CTSF, DNAJC5, GRN, KCTD7, MFSD8, PPT1, TPP1 |
| 26 | Leukodystrophy/ leukoencephalopathy and differential diagnoses | 177 | AARS, AARS2, ABCD1, ACOX1, ADAR, AGA, AIMP1, ALDH3A2, AP4E1, APOPT1, ARSA, ASPA, ATP7A, ATP7B, AUH, BCAP31, BCS1L, C12orf65, CLCN2, COL4A1, COL4A2, COX10, COX15, COX6B1, CSF1R, CTC1, CYP27A1, CYP7B1, D2HGDH, DARS, DARS2, DDHD2, DMPK, EARS2, EIF2B1, EIF2B2, EIF2B3, EIF2B4, EIF2B5, ERCC2, ERCC3, ERCC6, ERCC8, ETFA, ETFB, ETFDH, FA2H, FAM126A, FARS2, FKRP, FKTN, FOLR1, FOXRED1, FUCA1, GALC, GAN, GBE1, GCDH, GFAP, GFM1, GJC2, GLA, GLB1, GMPPB, HEPACAM, HEXA, HMGCL, HSD17B4, HSPD1, HTRA1, IBA57, IDS, IFIH1, ISCA2, KCNT1, L2HGDH, LAMA2, LARGE, LMNB1, LRPPRC, MCOLN1, MLC1, MMACHC, MPV17, MTFMT, NADK2, NDUFA1, NDUFA12, NDUFA2, NDUFA9, NDUFAF1, NDUFAF2, NDUFAF5, NDUFAF6, NDUFS1, NDUFS2, NDUFS3, NDUFS4, NDUFS7, NDUFS8, NDUFV1, NEU1, NOTCH3, NPC1, NPC2, NUBPL, OCLN, OCRL, PC, PET100, PEX1, PEX2, PEX3, PEX5, PEX6, PEX7, PEX10, PEX11B, PEX12, PEX13, PEX14, PEX16, PEX19, PEX26, PHGDH, PHYH, PLA2G6, PLEKHG2, PLP1, POLG, POLR1C, POLR3A, POLR3B, POMGNT1, POMT1, POMT2, PRF1, PSAP, PSAT1, PYCR2, RARS, RNASEH2A, RNASEH2B, RNASEH2C, RNASET2, SAMHD1, SCO2, SCP2, SDHA, SDHAF1, SDHB, SLC16A2, SLC17A5, SLC25A1, SLC25A12, SOX10, SPG11, SPG20, SPG21, STX11, STXBP2, SUCLA2, SUMF1, SURF1, TACO1, TBCK, TMEM70, TREM2, TREX1, TTC19, TUBB4A, TUFM, TYMP, TYROBP, UNC13D, VPS11, ZFYVE26 |
| 27 | Leukodystrophy/ leukoencephalopathy | 76 | AARS, AARS2, ABCD1, ACOX1, ADAR, AIMP1, ALDH3A2, ARSA, ASPA, BCAP31, CLCN2, CSF1R, CTC1, CYP27A1, DARS, DARS2, EARS2, EIF2B1, EIF2B2, EIF2B3, EIF2B4, EIF2B5, FAM126A, FUCA1, GALC, GBE1, GCDH, GFAP, GJC2, HEPACAM, HSD17B4, HSPD1, HTRA1, IFIH1, L2HGDH, LMNB1, MLC1, NOTCH3, PEX1, PEX10, PEX11B, PEX12, PEX13, PEX14, PEX16, PEX19, PEX2, PEX26, PEX3, PEX5, PEX6, PEX7, PLEKHG2, PLP1, POLR1C, POLR3A, POLR3B, PSAP, PYCR2, RARS, RNASEH2A, RNASEH2B, RNASEH2C, RNASET2, SAMHD1, SCP2, SLC16A2, SLC17A5, SOX10, SUMF1, TBCK, TREM2, TREX1, TUBB4A, TYROBP, VPS11 |
| 28 | Small Vessel Disease | 6 | COL4A1, CTC1, GLA, HTRA1, NOTCH3, TREX1 |
| 29 | Basal Ganglia Calcification | 27 | ADAR, AIRE, BRAF, CA2, COL4A1, CTC1, ERCC6, ERCC8, FOLR1, GALC, GATA3, GFAP, IFIH1, PANK2, PDGFB, PDGFRB, POLG, RNASEH2A, RNASEH2B, RNASEH2C, SAMHD1, SLC20A2, TBCE, TREM2, TREX1, TYROBP, XPR1 |
| 30 | Complete Panel- Neurodegenerative Disease | 549 | AARS, AARS2, ABCA7, ABCB7, ABCD1, ABHD12, ACO2, ACOX1, ACTB, ACY1, ADAR, ADCK3, ADCY5, ADD3, AFG3L2, AGA, AHI1, AIMP1, AIRE, ALDH18A1, ALDH3A2, ALDH5A1, ALG6, ALS2, AMACR, AMPD2, ANG, ANO10, ANO3, AP4B1, AP4E1, AP4M1, AP4S1, AP5Z1, APOE, APOPT1, APP, APTX, ARFGEF2, ARG1, ARHGEF2, ARHGEF28, ARL13B, ARL6IP1, ARSA, ARSI, ARX, ASAH1, ASNA1, ASPA, ATCAY, ATL1, ATM, ATP13A2, ATP1A3, ATP2B3, ATP2B4, ATP6AP2, ATP7A, ATP7B, ATP8A2, ATXN2, AUH, B4GALNT1, BCAP31, BCS1L, BEAN1, BICD2, BRAF, BSCL2, BTD, C10orf2, C12orf65, C19orf12, CA2, CA8, CACNA1A, CACNA1B, CACNA1G, CACNB4, CC2D2A, CCDC88C, CCT5, CD33, CEP290, CHCHD10, CHCHD2, CHMP2B, CHRM1, CIZ1, CLCN1, CLCN2, CLN3, CLN5, CLN6, CLN8, COASY, COL4A1, COL4A2, COL6A3, COMT, COQ2, COQ9, COX10, COX15, COX20, COX6B1, CP, CPT1C, CSF1R, CSTB, CTC1, CTSD, CTSF, CWF19L1, CYP27A1, CYP2U1, CYP7B1, D2HGDH, DAO, DARS, DARS2, DCAF17, DCTN1, DDHD1, DDHD2, DLAT, DMPK, DMXL2, DNAJB2, DNAJC13, DNAJC19, DNAJC3, DNAJC5, DNAJC6, DNM2, DNMT1, DPP6, DRD1, DYNC1H1, EARS2, EEF2, EIF2B1, EIF2B2, EIF2B3, EIF2B4, EIF2B5, EIF4G1, ELOVL4, ELOVL5, ELP3, ENTPD1, EPM2A, ERBB4, ERCC2, ERCC3, ERCC4, ERCC5, ERCC6, ERCC8, ERLIN1, ERLIN2, ETFA, ETFB, ETFDH, EWSR1, EXOSC3, EXOSC8, FA2H, FAM126A, FARS2, FASTKD2, FBXO38, FBXO7, FGF14, FGGY, FIG4, FKRP, FKTN, FLRT1, FLVCR1, FMR1, FOLR1, FOXG1, FOXRED1, FRRS1L, FTL, FUCA1, FUS, FXN, GAD1, GALC, GAN, GARS, GATA3, GBA, GBA2, GBE1, GCDH, GCH1, GFAP, GFM1, GJB1, GJC2, GLA, GLB1, GLE1, GM2A, GMPPB, GNAL, GNAO1, GOSR2, GPR56, GRID2, GRM1, GRN, HACE1, HCN1, HEPACAM, HEXA, HEXB, HFE, HMGCL, HNRNPA1, HNRNPA2B1, HNRNPD, HPCA, HPRT1, HSD17B4, HSPB1, HSPB3, HSPB8, HSPD1, HTRA1, HTRA2, IBA57, IDS, IFIH1, IGHMBP2, INPP5E, ISCA2, ITM2B, ITPR1, ITPR2, KANK1, KCNA1, KCNA2, KCNC1, KCNC3, KCND3, KCNJ10, KCNMA1, KCNT1, KCTD17, KCTD7, KIAA0196, KIAA0226, KIF1A, KIF1C, KIF5A, KLC4, L1CAM, L2HGDH, LAMA1, LAMA2, LARGE, LAS1L, LMNB1, LMNB2, LRPPRC, LRRK2, LYST, MAG, MAPT, MARK4, MARS, MARS2, MATR3, MCOLN1, MECP2, MED20, MFSD8, MLC1, MMACHC, MPV17, MRE11A, MTFMT, MTHFR, MTPAP, MTTP, NADK2, NAGLU, NALCN, NDUFA1, NDUFA12, NDUFA2, NDUFA9, NDUFAF1, NDUFAF2, NDUFAF5, NDUFAF6, NDUFS1, NDUFS2, NDUFS3, NDUFS4, NDUFS7, NDUFS8, NDUFV1, NEFH, NEK1, NEU1, NHLRC1, NIPA1, NKX2-1, NLGN1, NOP56, NOTCH3, NPC1, NPC2, NPHP1, NT5C2, NUBPL, NUP62, OCLN, OCRL, OPA1, OPA3, OPTN, PANK2, PARK2, PARK7, PAX6, PC, PCNA, PDE10A, PDE8B, PDGFB, PDGFRB, PDHX, PDP1, PDSS1, PDSS2, PDYN, PET100, PEX1, PEX10, PEX11B, PEX12, PEX13, PEX14, PEX16, PEX19, PEX2, PEX26, PEX3, PEX5, PEX6, PEX7, PFN1, PGAP1, PHGDH, PHYH, PIK3R5, PINK1, PLA2G6, PLEKHG2, PLEKHG5, PLP1, PMM2, PMPCA, PNKD, PNKP, PNPLA6, PODXL, POLG, POLH, POLR1C, POLR3A, POLR3B, POMGNT1, POMT1, POMT2, PON1, PON2, PON3, PPP2R2B, PPT1, PQBP1, PRF1, PRICKLE1, PRKAR1B, PRKCG, PRKRA, PRNP, PRPH, PRPS1, PRRT2, PSAP, PSAT1, PSEN1, PSEN2, PTEN, PTRH2, PYCR2, RAB29, RAB39B, RAB3GAP1, RAB3GAP2, RARS, REEP1, REEP2, RELN, REPS1, RNASEH1, RNASEH2A, RNASEH2B, RNASEH2C, RNASET2, RNF170, RNF216, RPGRIP1L, RPIA, RTN2, SACS, SAMHD1, SCN2A, SCN8A, SCO2, SCP2, SCYL1, SDHA, SDHAF1, SDHB, SETX, SGCE, SIGMAR1, SIL1, SLC16A2, SLC17A5, SLC19A3, SLC1A3, SLC1A4, SLC20A2, SLC25A1, SLC25A12, SLC25A15, SLC25A42, SLC2A1, SLC30A10, SLC33A1, SLC52A2, SLC5A7, SLC6A1, SLC6A3, SLC9A1, SMPD1, SNAP25, SNCA, SNX14, SOD1, SOX10, SPAST, SPG11, SPG20, SPG21, SPG7, SPR, SPTBN2, SQSTM1, SRCAP, SS18L1, STUB1, STX11, STXBP2, SUCLA2, SUMF1, SURF1, SYNE1, SYNJ1, SYT14, TACO1, TAF1, TAF15, TARDBP, TBCE, TBCK, TBK1, TDP1, TECPR2, TENM4, TFG, TGM6, TH, THAP1, TIMM8A, TMEM216, TMEM240, TMEM67, TMEM70, TOMM40, TOR1A, TPP1, TRAPPC11, TREM2, TREX1, TRNT1, TRPV4, TSEN54, TSFM, TTBK2, TTC19, TTPA, TUBA4A, TUBB4A, TUFM, TYMP, TYROBP, UBA1, UBA5, UBQLN2, UCHL1, UNC13A, UNC13D, UQCRQ, VAMP1, VAPB, VCP, VEGFA, VLDLR, VPS11, VPS13A, VPS13C, VPS35, VPS37A, VPS54, VRK1, VWA3B, WDR45, WDR73, WDR81, WFS1, WNT1, WWOX, XK, XPA, XPC, XPR1, ZFYVE26, ZFYVE27 |