

Supplementary Table 1. Data source and reanalysis approach to the 46 participated families

ID	Initial WES approach	Reanalysis data source	Reanalysis approach	Time between initial WES and reanalysis (days)
U002	Trios	DNA	Singleton	1709
U008	Trios	Existing raw data	Trios	1739
U009	Singleton	DNA	Singleton	1551
U011	Trios	DNA	Singleton	1535
U013	Singleton	DNA	Singleton	1454
U014	Trios	Existing raw data	Singleton	1189
U018	Singleton	DNA	Trios	1389
U019	Singleton	DNA	Trios	713
U020	Singleton	DNA	Trios	1411
U021	Singleton	DNA	Trios	1469
U022	Singleton	DNA	Singleton	1512
U024	Singleton	DNA	Trios	929
U026	Singleton	DNA	Trios	1384
U029	Singleton	DNA	Trios	1213
U036	Singleton	Existing raw data	Trios	301
U037	Singleton	Existing raw data	Singleton	1428
U038	Singleton	DNA	Trios	1327
U043	Singleton	DNA	Trios	1231
U045	Singleton	DNA	Trios	1306
U046	Singleton	DNA	Singleton	1365
U048	Singleton	DNA	Singleton	1384
U051	Singleton	DNA	Trios	1331
U054	Singleton	DNA	Singleton	1278
U057	Singleton	Existing raw data	Duo	939
U058	Singleton	DNA	Singleton	530
U060	Singleton	DNA	Trios	1218
U061	Singleton	DNA	Trios	1168
U065	Singleton	DNA	Singleton	1098
U066	Singleton	DNA	Singleton	1055
U067	Singleton	DNA	Singleton	1197
U070	Singleton	DNA	Singleton	1036
U071	Singleton	DNA	Singleton	1372
U072	Singleton	DNA	Trios	1035
U075	Singleton	DNA	Singleton	1131
U077	Singleton	Existing raw data	Singleton	851
U078	Singleton	DNA	Singleton	965
U079	Singleton	DNA	Trios	936
U082	Singleton	Existing raw data	Singleton	957
U085	Singleton	Existing raw data	Singleton	1092
U086	Singleton	Existing raw data	Singleton	1073
U088	Singleton	Existing raw data	Singleton	1148
U091	Singleton	DNA	Singleton	917
U093	Singleton	Existing raw data	Singleton	934
U094	Trios	DNA	Trios	646
U101	Singleton	DNA	Trios	770
U104	Singleton	DNA	Singleton	678

Supplementary Table 2. Variants' pathogenicity classification according to the ACMG guidelines 2015 and the submitted ClinVar accession

ID	Gene	Variant	Zygosity	Segregation	Pathogenicity according to		
					ACMG guidelines 2015	Classification Criteria	ClinVar Accession
U018	ATP1A3	NC_000019.9:g.42489109G>C NM_152296.5:c.954C>G, p.(Ile318Met)	Heterozygous	De novo	Pathogenic	PS2, PM1, PM2, PP2, PP3	SCV001364379
U022	PACS1	NC_000011.9:g.65978677C>T NM_018026.4:c.607C>T, p.(Arg203Trp)	Heterozygous	De novo	Pathogenic	PS2, PS4, PM1, PM2, PP3	SCV001364380
U036	MN1	NC_000022.10:g.28146988_28146997dup NM_002430.3:c.3870_3879dupTGACGCCAAG, p.(Ala1294Ter)	Heterozygous	De novo	Pathogenic	PVS1, PS2, PS3, PM2	VCV000812561.1
U043	PTPN11	NC_000012.11:g.112856920C>T NM_002834.5:c.5C>T, p.(Thr2Ile)	Heterozygous	De novo	Pathogenic	PS2, PS4, PM2, PP2, PP3	SCV001364381
U045	SKIV2L	NC_000006.11:g.31931188A>G NM_006929.5:c.1404-2A>G	Heterozygous	Paternal	Likely Pathogenic	PVS1, PM2	SCV001364382
		NC_000006.11:g.31931511G>A NM_016138.5:c.1647+1G>A	Heterozygous	Maternal	Likely Pathogenic	PVS1, PM2	SCV001364383
U057	PRF1	NC_000010.10:g.72358459C>T NM_005041.5:c.1018G>A, p.(Asp340Asn)	Homozygous	Inherited from parents	Likely Pathogenic	PS3, PM2, PP1, PP4, PP5	SCV001364384
U066	MFN2	NC_000001.10:g.12058934C>T NM_001127660.1:c.707C>T, p.(Thr236Met)	Heterozygous	Unknown	Likely Pathogenic	PM1, PM2, PP2, PP3	SCV001364385
U071	COL11A1	NC_000001.10:g.103427475C>T NM_001854.4:c.3115G>A, p.(Gly1039Ser)	Heterozygous	Unknown	Likely Pathogenic	PM1, PM2, PP2, PP3	SCV001364386
U075	SPTAN1	NC_000009.11:g.(?_131341916)_(131344171_?)del NM_001130438.3:c.(?_1225)_(1572_?)del (exon 10-12 deletion)	Heterozygous	De novo	Pathogenic	PVS1, PS2, PM2	SCV001364387
U077	SPTAN1	NC_000009.11:g.131374047C>T NM_001130438.3:c.4828C>T, p.(Arg1610Trp)	Heterozygous	De novo	Likely Pathogenic	PS2, PM2, PP5	SCV001364388
U086	GNB1	NC_000001.10:g.1737942A>G NM_002074.5:c.239T>C, p.(Ile80Thr)	Heterozygous	Unknown	Pathogenic	PS3, PS4, PM1, PM2, PM5, PP2, PP3	SCV001364389

U094	COQ7	NC_000016.9:g.19089425AG>TAATGCATC					
		NM_016138.5:c.599_600delinsTAATGCATC, p.(Lys200Ilefs*56)	Heterozygous	Paternal	Likely Pathogenic	PVS1, PM2	SCV001364390
		NC_000016.9:g.19085309C>T					
		NM_016138.5:c.319C>T, p.(Arg107Trp)	Heterozygous	Maternal	Likely pathogenic	PS3, PM2, PM3, PP3	SCV001364391