

Supplementary Table S2. Rank positions of causative variants in patients' data

Patient	Disease (OMIM term)	Gene	HGVS notation (GRCh37/ hg19)	Inheritance	HPO ID					Rank				
										hiPHIVE	PhenIX	Phen- Gen	combined max (eXtasy)	order statistics (eXtasy)
1	CONGENITAL DISORDER OF GLYCOSYLATIO N, TYPE 1K	<i>ALG1</i>	g.5121993 G>A, g.5128843 C>T	AR	0003 256	0002 014	0001 250	0000 252	0001 263	7	10	13	62	108
2	SOTOS SYNDROME	<i>NSD1</i>	g.1767158 32C>T	AD	0000 256	0001 548	0011 622	0001 643	0001 263	1	1	-	25	2
3	JOUBERT SYNDROME 3	<i>AH11</i>	g.1357543 26G>A, g.1357843 53C>A	AR	0002 419	0000 639	0001 263			1	1	6	-	-
4	NEUROFIBROM ATOSIS TYPE 1	<i>NF1</i>	g.2966488 0G>A	AD	0000 957					1	1	-	×	×
5	DEAFNESS, AUTOSOMAL DOMINANT 6	<i>WFS1</i>	g.6303911 G>A	AD	0000 365					1	1	-	×	×
6	HYPOCHONDRO PLASIA	<i>FGFR3</i>	g.1807371 C>A	AD	0000 256	0007 359	0002 882	0004 322		2	1	-	15	1

Supplementary Table S2 – Continued

7	MITOCHONDRIA L SHORT-CHAIN ENOYL-CoA HYDRATASE 1 DEFICIENCY	<i>ECHS1</i>	g.1351868 33G>A, g.1351868 37T>C	AR	0007 146	0002 151	0000 639	0001 263	0001 250	-	-	-	-	-
8	SOTOS SYNDROME	<i>NSDI</i>	g.1767190 45C>T	AD	0000 256	0001 263				1	1	-	16	13
9	AORTIC ANEURYSM FAMILIAL THORACIC 6	<i>ACTA2</i>	g.9069929 9C>T	AD	0002 622					1	1	-	×	×
10	TELANGIECTASI A HEREDITARY HEMORRHAGIC TYPE 1	<i>ENG</i>	g.1305875 54A>AG	AD	0000 421					3	1	-	×	×
11	JOUBERT SYNDROME 5	<i>CEP290</i>	g.8845655 6C>T, g.8846243 4A>T	AR	0002 419	0001 337	0000 496	0001 249		1	1	-	-	-
12	MITOCHONDRIA L SHORT-CHAIN ENOYL-CoA HYDRATASE 1 DEFICIENCY	<i>ECHS1</i>	g.1351841 74T>C, g.1351868 33G>A	AR	0007 146	0002 072	0001 250	0001 263		-	-	-	-	-

Supplementary Table S2 – Continued

13	MARFAN SYNDROME	<i>FBN1</i>	g.4893692 4CG>C	AD	0001 166	0002 622				1	1	-	×	×
14	NEUROFIBROM ATOSIS TYPE1	<i>NFI</i>	g.2955052 1CAG>C	AD	0000 957					1	1	-	×	×
15	RETT SYNDROME CONGENITAL VARIANT	<i>FOXG1</i>	g.2923693 8C>CG	AD	0005 484	0001 263	0007 359	0002 072		1	1	-	-	-
16	MIGRAINE FAMILIAL HEMIPLEGIC1	<i>CACNA1A</i>	g.1341900 3C>G	AD	0006 846	0001 249	0001 250			4	14	-	-	-
17	NOONAN SYNDROME- LIKE DISORDER WITH LOOSE ANAGEN HAIR1	<i>SHOC2</i>	g.1127241 20A>G	AD	0001 249	0000 316	0004 322			1	1	-	198	97
18	NEUROFIBROM ATOSIS TYPE1	<i>NFI</i>	g.2966508 0GC>G	AD	0000 957	0001 263				1	1	-	×	×
19	NIEMANN-PICK DISEASE TYPE C1	<i>NPC1</i>	g.2112447 0T>TAG, g.2114147 9G>A	AR	0002 505	0001 730	0001 260	0100 543	0000 130	2	16	19	149	18
20	NEUROFIBROM ATOSIS TYPE 1	<i>NFI</i>	g.2956301 6T>TA	AD	0000 957					1	1	-	×	×

‘-’ - not ranked. ‘×’ - could not analyze.