**Table 1 (supplemental)**

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| --- | --- | --- | --- | --- | --- |
| Name of panel | **Company** | **Year** | **Number of genes** | **Results** | **Result manual entry**  |
| Epilepsy and seizure disorders sequencing panel | Emory Genetics | 2016 | 109 | Pathogenic (carrier)VUSLikely pathogenic | CSTB: c.67-1G>C, heterozygousSCARB2: c.445G>A (p.Val149Met), heterozygousGRIN2A: c.445G>A (p.Ala716Thr), heterozygous |
| Comprehensive epilepsy panel | GeneDX | 2016 | 87 | VUS (x2)  | CHRNA4: c.1169G>A (p.Gly390Glu), heterozygousSLC13A5: c.569G>A (p. Gly190Asp), heterozygous |
| Childhood epilepsy panel | GeneDX | 2017 | 58 | VUS  | CACNA1A gene  |
| Comprehensive epilepsy panel | GeneDX | 2017 | 87 | VUS (x2) |  SLC2A1: c.584T>C (p.Ile195Thr), heterozygousPOLG: c.2878C>T ( p.Pro960Ser), heterozygous |
| Comprehensive epilepsy panel | GeneDX | 2015 | 70 | VUS | SCN1A gene: c2507A>C (p. Glu686Ala), heterozygous |
| Comprehensive epilepsy panel | GeneDX | 2018 | 87 | Normal  |  |
| Comprehensive panel for epileptic encephalopathy | N/A | 2017 | 137 | Normal  |  |
| Comprehensive Epilepsy Panel | GeneDX | 2017 | 87 | VUS (x2) | MBD5: partial deletion including exon 3, heterozygousPOLG: c.1174C>G (p.Leu392Val), heterozygous |
| Infantile epilepsy panel | GeneDX | 2015 | 53 | Normal  |  |
| Infancy and childhood epilepsy panel | Courtagen | 2015 | 70 | VUS | GRIN2A: c.2047G>C (p. Gly683Arg), heterozygous  |
| Childhood epilepsy panel | GeneDX | 2017 | 58 | Normal  |  |
| Comprehensive epilepsy panel | GeneDX | 2017 | 87 | Normal  |  |
| Comprehensive Epilepsy panel | GeneDX | 2015 | 70 | Pathogenic variant  | KCNQ2: c.901G>A (p.Gly301Ser) |
| Infantile epilepsy panel  | GeneDX | 2015 |  51 | VUS (x3) | SCN2A: c.2050C>T, (p.Arg684Trp), heterozygous MFSD8: c.1022T>G ( p.Leu341Arg) heterozygousCACNB4: c.44C>G ( p.Pro15Arg), heterozygous |
| Comprehensive epilepsy panel | GeneDX | 2017 | 70 | Normal  |  |
| Comprehensive epilepsy panel | GeneDX | 2017 | 87 | Normal  |  |
| Childhood epilepsy panel | GeneDX | 2017 | 58 | VUS  | KCNT1 gene: c.1407C>G ( p.His469Gln), heterozygous |
| EpiSEEK panel | Courtagen | 2016 | 471 |  VUS (x2), likely pathogenic variant  | CACNB4: c.311G>T (p.Cys104Phe), heterozygousSCN5A: c.6010T>C (p.Phe2004Leu), heterozygous Acy1: c.1057C>T ( p.Arg353Cys) heterozygous |
| Infantile epilepsy panel | GeneDX | 2015 | 53 | Pathogenic variant  | GABRA1: c.641G>A (p. Arg214 His), heterozygous |
| Epilepsy panel, infantile epilepsy panel | GeneDX (for both) | 2015 | 19, 51 | Normal  |  |
| NGS385 comprehensive epilepsy NextGen DNA screening panel | MNG | 2015 | 126 | VUS (x4), Pharmacogenomic variant  | LAMC3: c. 3250G>C (p.Glu1084Gln), heterozygousLAMC3 c.3379G>A (p.Glu1127Lys), heterozygous SUOX:c.1298G>A ( p.Arg433Gln), heterozygous ACSF3: c.1298G>A (p.Arg433Gln), heterozygous POLG: c.3708G>T (p.Gln1236His), heterozygous |
| Comprehensive Epilepsy Panel  | GeneDx | 2017 | 87 | Pathogenic variant  | IQSEC2: c.2911C>T (P; Arg971Ter), heterozygous |
| Infantile epilepsy panel | Gene Dx | 2013 | 49 | Pathogenic variant  | STXBP1 : c.1663G>T (p.Glu555Ter), heterozygous |