

**PATIENT INFORMATION**

First name		MI	Last name	
Date of birth (MM/DD/YYYY)	Sex <input type="radio"/> M <input type="radio"/> F	MRN (medical record number)		
Ancestry <input type="radio"/> Asian <input type="radio"/> Black/African American <input type="radio"/> White/Caucasian <input type="radio"/> Ashkenazi Jewish <input type="radio"/> Hispanic <input type="radio"/> Native American <input type="radio"/> Pacific Islander <input type="radio"/> Other:				
▶ Email address (for report access after release by medical professional)				
Phone		Is this patient deceased? <input type="radio"/> Yes <input type="radio"/> No Deceased date:		
Address			City	
State	ZIP code	Country		

**SPECIMEN INFORMATION**

Label each tube with the patient's full name, date of birth, and specimen collection date.  
 A requisition form MUST accompany each specimen. [www.invitae.com/specimen-requirements](http://www.invitae.com/specimen-requirements)

Specimen type  
 Blood  Saliva  Assisted saliva  DNA - source:

*We are unable to accept blood/saliva from patients with:*  
 • Allogeneic bone marrow transplants • Blood transfusion <2 weeks prior to specimen collection

▶ Collection date (MM/DD/YYYY)	Special cases <input type="radio"/> History of/current hematologic malignancy <input type="radio"/> Resubmission
--------------------------------	--

**REASON FOR TESTING**

ICD-10 codes	Previous results
Diagnostic for personal history? <input type="radio"/> Yes <input type="radio"/> No If yes, describe below.	

**PRACTICE INFORMATION**

<b>Practice name and address</b>		
Institution/practice name		
Phone	Fax	
Address		City
State	ZIP code	Country
<b>Primary clinical contact</b>		
Name		Role/title
Phone		NPI
Email address (for report access)		
<b>Ordering physician</b>		
<input type="radio"/> Same as primary clinical contact		
Name		NPI
Email address (for report access)		
<b>Additional clinical or laboratory contact (optional)</b>		
Name		Email address (for report access)

**Letter of Medical Necessity (LMN)**

- I have attached an LMN and/or other documentation for insurance billing purposes.  
 I agree to allow Invitae to transfer the information from this requisition to an LMN and/or other documentation using the ordering physician's name as the signature for insurance billing.

**Family history?**  Yes  No If yes, describe in detail below or attach pedigree.  
 If there is a known familial variant, indicate here.

 **MEDICARE BILLING (U.S. ONLY)**

I have attached a copy of the patient's Medicare card & requirements (criteria checklist, patient consent, LMN; available at [www.invitae.com/billing](http://www.invitae.com/billing))

Medicare ID#	Medicare is: <input type="radio"/> Primary payer <input type="radio"/> Secondary payer
<input type="radio"/> The patient has been treated as a hospital inpatient (>24 hour stay) in the last 14 days	

 **INSURANCE BILLING (U.S. ONLY)**

I have attached a copy of the patient's card

Insurance company name	Member ID#
Patient relation to policy holder: <input type="radio"/> Self <input type="radio"/> Child <input type="radio"/> Spouse <input type="radio"/> Other	Policy holder name

 **INSTITUTIONAL BILLING**

Send invoice to practice address above

Billing contact name	Phone	Fax
Billing email address		
Billing address		City
State	ZIP code	Country

 **PATIENT PAY BILLING**

**Invitae will send an electronic invoice to the patient email listed above**

 **OTHER BILLING** Invitae study code:

**OTHER COMMENTS**

By signing this form, the medical professional acknowledges that the individual/family member authorized to make decisions for the individual (collectively, the "Patient") has been supplied information regarding and consented to undergo genetic testing, substantially as set forth in Invitae's Informed Consent for Genetic Testing ([www.invitae.com/patient-consent](http://www.invitae.com/patient-consent)), and has been informed that Invitae may notify them of clinical updates related to genetic test results (in consultation with the ordering medical professional as indicated). The Patient has further been informed and hereby authorizes Invitae Corporation ("Invitae") and its designees to release information concerning testing to their insurer in order to process and/or appeal claims on behalf of the Patient. For amounts received directly, the Patient agrees to remit payment to Invitae for testing services rendered. In addition to the above, I attest that I am the ordering physician, or I am authorized by the ordering physician to order this test, or I am authorized under applicable state law to order this test.

▶ Medical professional signature	Date
----------------------------------	------

**ORDER INSTRUCTIONS**

Select a pre-curated test, combine multiple tests, or customize your own test for each patient. Invitae's pricing is per clinical area for initial order and re-requisition. All tests on this form are organized by clinical area. If your order contains tests from multiple clinical areas, you will need to send in two sample tubes and your order will represent two billable events. Your test results will be delivered as two reports. Please contact Client Services with any questions. For Invitae full test menu, please visit [www.invitae.com](http://www.invitae.com).

**RE-REQUISITION**

Invitae offers one re-requisition at no additional charge within 90 days for genes within the original clinical area. For more information and to request online, please visit [www.invitae.com/re-requisition](http://www.invitae.com/re-requisition).

**FAMILY VARIANT TESTING**

Invitae offers Family Variant Testing at no additional charge within 90 days for the genes in which the original family member's variant was identified. In such cases, please use the Family Variant Testing/VUS Resolution requisition form (TRF920), available at [www.invitae.com/forms](http://www.invitae.com/forms).

**PRELIMINARY-EVIDENCE GENES**

Invitae's primary panels contain genes for which there is definitive evidence that variants in these genes cause specific diseases. Preliminary-evidence genes are genes for which there is only early evidence of a relationship between variants in these genes and specific diseases. All preliminary-evidence genes are indicated as such on the requisition form below.

**ASSAY**

Invitae is a CAP-accredited and CLIA-certified clinical diagnostic laboratory performing full-gene sequencing and deletion/duplication analysis using next-generation sequencing technology (NGS). Search for details on the analysis of any gene in our test catalog at [www.invitae.com/physician/search](http://www.invitae.com/physician/search).

*Invitae continually updates its panels based on the most recent evidence. Please note that if an order is placed using an older version of this form, Invitae reserves the right to upgrade any ordered panel(s) to the current version(s). To avoid confusion, please consider placing your order using our online test catalog.*

To request a complimentary specimen collection kit visit [www.invitae.com/request-a-kit](http://www.invitae.com/request-a-kit)

**SHIPPING INSTRUCTIONS**  
Please ship specimen overnight in insulated containers:

**Attn: Invitae Client Services**  
**1400 16th Street**  
**San Francisco, CA 94103**  
**USA**

## CLINICAL AREA: NEUROLOGY

Test code	Test name	# gene(s)	Gene list
<b>Movement Disorders</b>			
<input type="radio"/> 03351	Invitae Dystonia Panel	16	ANO3, ATP1A3, GCH1, GNAL, PARK2, PNKD, PRKRA, PRRT2, SGCE, SLC2A1, SLC6A3, SPR, TH, THAP1, TOR1A, TUBB4A
<input type="radio"/> 03351.1	Add-on preliminary-evidence genes	5	CIZ1, DRD2, HPCA, KCTD17, TOR1AIP1
<input type="radio"/> 03352	Invitae Hereditary Parkinson's Disease & Parkinsonism Panel	15	ATP13A2, DCTN1, DNAJC6, FBXO7, GCH1, LRRK2, PARK2, PARK7, PINK1, PRKRA, SLC6A3, SNCA, SPR, TH, VPS35
<input type="radio"/> 03352.1	Add-on preliminary-evidence genes	2	CHCHD2, MAPT
<b>Neurodegenerative Disorders</b>			
<input type="radio"/> 03502	Invitae Combined Hereditary Dementia and Amyotrophic Lateral Sclerosis Panel	21	ALS2, APP, CHCHD10, DCTN1, FUS, GRN, MAPT, OPTN, PFN1, PRNP, PSEN1, PSEN2, SNCA, SOD1, SPG11, TARDBP, TBK1, TFG, UBQLN2, VAPB, VCP
<input type="radio"/> 03502.1	Add-on preliminary-evidence genes	6	CHMP2B, HNRNPA2B1, MATR3, SETX, SIGMAR1, SQSTM1
<input type="radio"/> 03503	Invitae Amyotrophic Lateral Sclerosis Panel	13	ALS2, CHCHD10, DCTN1, FUS, OPTN, PFN1, SOD1, SPG11, TARDBP, TBK1, TFG, UBQLN2, VAPB
<input type="radio"/> 03503.1	Add-on preliminary-evidence genes	6	CHMP2B, MATR3, SETX, SIGMAR1, SQSTM1, VCP
<input type="radio"/> 03505	Invitae Frontotemporal Dementia Panel	9	CHCHD10, DCTN1, FUS, GRN, MAPT, TARDBP, TBK1, UBQLN2, VCP
<input type="radio"/> 03505.1	Add-on preliminary-evidence genes	4	CHMP2B, HNRNPA2B1, PSEN1, SQSTM1
<input type="radio"/> 03504	Invitae Hereditary Alzheimer's Disease Panel	3	APP, PSEN1, PSEN2
<input type="radio"/> 03352	Invitae Hereditary Parkinson's Disease & Parkinsonism Panel	15	ATP13A2, DCTN1, DNAJC6, FBXO7, GCH1, LRRK2, PARK2, PARK7, PINK1, PRKRA, SLC6A3, SNCA, SPR, TH, VPS35
<input type="radio"/> 03352.1	Add-on preliminary-evidence genes	2	CHCHD2, MAPT
<input type="radio"/> 03506	Invitae Hereditary Prion Disease Test	1	PRNP

**CLINICAL AREA: NEUROLOGY (continued)**

Test code	Test name	# gene(s)	Gene list
<b>Neuromuscular Disorders</b>			
<input type="radio"/> 03280	Invitae Comprehensive Neuromuscular Disorders Panel	104	ACTA1, AGRN, ALG2, ANO5, ATP2A1, B3GALNT2, B4GAT1, BAG3, BIN1, CACNA1S, CAPN3, CAV3, CCDC78, CFL2, CHAT, CHKB, CHRNA1, CHRNB1, CHRND, CHRNE, CLCN1, CNTN1, COL6A1, COL6A2, COL6A3, COLQ, CPT2, CRYAB, DAG1, DES, DMD, DNAJB6, DNM2, DOK7, DPAGT1, DPM1, DPM2, DPM3, DYSF, EMD, FHL1, FKBP14, FKR, FKTN, FLNC, GAA, GFPT1, GMPPB, GNE, ISPD, ITGA7, KBTBD13, KCNJ2, KLHL40, KLHL41, LAMA2, LAMP2, LARGE1, LDB3, LMNA, LMOD3, MATR3, MEGF10, MTM1, MUSK, MYH2, MYH7, MYL2, MYOT, MYPN, NEB, PLEC, PNPLA2, POMGNT1, POMGNT2, POMK, POMT1, POMT2, RAPSN, RYR1, SCN4A, SELENON, SGCA, SGCB, SGCD, SGCG, SMN1, SMN2, SQSTM1, STAC3, STIM1, TAZ, TCAP, TIA1, TMEM5, TNNT1, TNPO3, TPM2, TPM3, TRAPPC11, TRIM32, TTN, VCP, VMA21
<input type="radio"/> 03280.1	Add-on preliminary-evidence genes	16	ALG14, COL12A1, HNRNPA2B1, HNRNPDL, LAMB2, LIMS2, LRP4, MYF6, PREPL, SNAP25, SUN1, SUN2, SYNE1, SYNE2, TMEM43, TOR1AIP1
<input type="radio"/> 03280.2	Add-on facioscapulohumeral muscular dystrophy type 2 (FSHD2) gene	1	SMCHD1
<input type="radio"/> 03281	Invitae Congenital Myasthenic Syndrome Panel	13	AGRN, ALG2, CHAT, CHRNA1, CHRNB1, CHRND, CHRNE, COLQ, DOK7, DPAGT1, GFPT1, MUSK, RAPSN
<input type="radio"/> 03281.1	Add-on preliminary-evidence genes	8	ALG14, GMPPB, LAMB2, LRP4, PLEC, PREPL, SCN4A, SNAP25
<input type="radio"/> 03285	Invitae Malignant Hyperthermia Susceptibility Panel	2	CACNA1S, RYR1
<input type="radio"/> 03291	Invitae Comprehensive Muscular Dystrophy Panel	46	ANO5, B3GALNT2, B4GAT1, CAPN3, CAV3, CHKB, COL6A1, COL6A2, COL6A3, DAG1, DES, DMD, DNAJB6, DPM1, DPM2, DPM3, DYSF, EMD, FHL1, FKR, FKTN, GAA, GMPPB, ISPD, ITGA7, LAMA2, LARGE1, LMNA, MYOT, PLEC, PNPLA2, POMGNT1, POMGNT2, POMK, POMT1, POMT2, SGCA, SGCB, SGCD, SGCG, TCAP, TMEM5, TNPO3, TRAPPC11, TRIM32, TTN
<input type="radio"/> 03291.1	Add-on preliminary-evidence genes	9	COL12A1, HNRNPDL, LIMS2, SUN1, SUN2, SYNE1, SYNE2, TMEM43, TOR1AIP1
<input type="radio"/> 03291.2	Add-on facioscapulohumeral muscular dystrophy type 2 (FSHD2) gene	1	SMCHD1
<input type="radio"/> 03292	Invitae Congenital Muscular Dystrophy Panel	26	B3GALNT2, B4GAT1, CHKB, COL6A1, COL6A2, COL6A3, DAG1, DMD, DPM1, DPM2, DPM3, FKR, FKTN, GMPPB, ISPD, ITGA7, LAMA2, LARGE1, LMNA, POMGNT1, POMGNT2, POMK, POMT1, POMT2, TCAP, TMEM5
<input type="radio"/> 03292.1	Add-on preliminary-evidence gene	1	COL12A1
<input type="radio"/> 03302	Invitae Dystroglycanopathy Panel	17	B3GALNT2, B4GAT1, DAG1, DPM1, DPM2, DPM3, FKR, FKTN, GMPPB, ISPD, LARGE1, POMGNT1, POMGNT2, POMK, POMT1, POMT2, TMEM5
<input type="radio"/> 03301	Invitae Dystrophinopathies Test	1	DMD
<input type="radio"/> 03303	Invitae Emery-Dreifuss Muscular Dystrophy Panel	3	EMD, FHL1, LMNA
<input type="radio"/> 03303.1	Add-on preliminary-evidence genes	5	SUN1, SUN2, SYNE1, SYNE2, TMEM43
<input type="radio"/> 03304	Invitae Limb-Girdle Muscular Dystrophy Panel	30	ANO5, CAPN3, CAV3, DAG1, DES, DMD, DNAJB6, DYSF, FKR, FKTN, GAA, GMPPB, ISPD, LMNA, MYOT, PLEC, PNPLA2, POMGNT1, POMK, POMT1, POMT2, SGCA, SGCB, SGCD, SGCG, TCAP, TNPO3, TRAPPC11, TRIM32, TTN
<input type="radio"/> 03304.1	Add-on preliminary-evidence genes	3	HNRNPDL, LIMS2, TOR1AIP1
<input type="radio"/> 03304.2	Add-on facioscapulohumeral muscular dystrophy type 2 (FSHD2) gene	1	SMCHD1
<input type="radio"/> 03361	Invitae Comprehensive Myopathy Panel	50	ACTA1, ANO5, ATP2A1, BAG3, BIN1, CACNA1S, CAV3, CCDC78, CFL2, CNTN1, COL6A1, COL6A2, COL6A3, CPT2, CRYAB, DES, DNAJB6, DNM2, DYSF, FHL1, FKBP14, FLNC, GNE, KBTBD13, KCNJ2, KLHL40, KLHL41, LDB3, LMNA, LMOD3, MATR3, MEGF10, MTM1, MYH7, MYL2, MYOT, MYPN, NEB, RYR1, SCN4A, SELENON, SQSTM1, STAC3, STIM1, TIA1, TNNT1, TPM2, TPM3, TTN, VCP
<input type="radio"/> 03361.1	Add-on preliminary-evidence genes	2	COL12A1, MYF6

**CLINICAL AREA: NEUROLOGY (continued)**

Test code	Test name	# gene(s)	Gene list
<b>Neuromuscular Disorders (continued)</b>			
<input type="radio"/> 03362	Invitae Congenital Myopathy Panel	26	ACTA1, BIN1, CCDC78, CFL2, CNTN1, COL6A1, COL6A2, COL6A3, DNM2, FKBP14, KBTBD13, KLHL40, KLHL41, LMOD3, MEGF10, MTM1, MYH7, MYPN, NEB, RYR1, SELENON, STAC3, TNNT1, TPM2, TPM3, TTN
<input type="radio"/> 03362.1	Add-on preliminary-evidence genes	2	COL12A1, MYF6
<input type="radio"/> 03371	Invitae Autophagic Vacuolar Myopathy Panel	3	DES, LAMP2, VMA21
<input type="radio"/> 03363	Invitae Central Core Disease Test	1	RYR1
<input type="radio"/> 03364	Invitae Centronuclear Myopathy Panel	6	BIN1, CCDC78, DNM2, MTM1, RYR1, TTN
<input type="radio"/> 03364.1	Add-on preliminary-evidence gene	1	MYF6
<input type="radio"/> 03365	Invitae Congenital Fiber-Type Disproportion Panel	7	ACTA1, LMNA, MYH7, RYR1, SELENON, TPM2, TPM3
<input type="radio"/> 03366	Invitae Distal Myopathy Panel	18	ANO5, BAG3, CAV3, CRYAB, DES, DNAJB6, DYSF, FHL1, FLNC, GNE, LDB3, MATR3, MYH7, MYOT, SQSTM1, TIA1, TTN, VCP
<input type="radio"/> 03372	Invitae Hyperkalemic Periodic Paralysis Test	1	SCN4A
<input type="radio"/> 03373	Invitae Hypokalemic Periodic Paralysis Panel	3	CACNA1S, KCNJ2, SCN4A
<input type="radio"/> 03374	Invitae Inclusion Body Myopathy Panel	4	GNE, MYH2, TTN, VCP
<input type="radio"/> 03374.1	Add-on preliminary-evidence gene	1	HNRNPA2B1
<input type="radio"/> 03367	Invitae Multimincore Disease Panel	2	RYR1, SELENON
<input type="radio"/> 03368	Invitae Myofibrillar Myopathy Panel	8	BAG3, CRYAB, DES, DNAJB6, FHL1, FLNC, LDB3, MYOT
<input type="radio"/> 03369	Invitae Nemaline Myopathy Panel	11	ACTA1, CFL2, KBTBD13, KLHL40, KLHL41, LMOD3, MYPN, NEB, TNNT1, TPM2, TPM3
<input type="radio"/> 03370	Invitae Type VI Collagenopathy Panel	3	COL6A1, COL6A2, COL6A3
<input type="radio"/> 03370.1	Add-on preliminary-evidence gene	1	COL12A1
<input type="radio"/> 03375	Invitae Myotonia and Paramyotonia Congenita Panel	2	CLCN1, SCN4A
<input type="radio"/> 03245	Invitae Spinal Muscular Atrophy Panel	2	SMN1, SMN2
<b>Neuropathies and Related Disorders</b>			
<input type="radio"/> 03200	Invitae Comprehensive Neuropathies Panel	70	AARS, AIFM1, AT1L1, AT1L3, ATP7A, BICD2, BSCL2, CHCHD10, DCTN1, DNAJB2, DNM2, DNMT1, DST, DYNC1H1, EGR2, FAM134B, FBXO38, FGD4, FIG4, GAN, GARS, GDAP1, GJB1, GNB4, HARS, HINT1, HSPB1, HSPB8, IGHMBP2, IKBKAP, INF2, KIF1A, LITAF, LMNA, LRSAM1, MED25, MFN2, MORC2, MPZ, MTMR2, NDRG1, NEFL, NGF, NTRK1, PDK3, PLEKHG5, PMP22, PRPS1, PRX, RAB7A, REEP1, SBF2, SCN11A, SCN9A, SH3TC2, SIGMAR1, SLC52A2, SLC52A3, SLC5A7, SPG11, SPTLC1, SPTLC2, TFG, TRIM2, TRPV4, TTR, UBA1, VAPB, WNK1, YARS
<input type="radio"/> 03200.1	Add-on preliminary-evidence genes	11	CCT5, FLRT1, HSPB3, LAS1L, MARS, PRDM12, SCN10A, SETX, SLC25A46, SURF1, VRK1
<input type="radio"/> 03200.2	Add-on spinal muscular atrophy genes	2	SMN1, SMN2
<input type="radio"/> 03201	Invitae Charcot-Marie-Tooth Disease Comprehensive Panel	42	AARS, AIFM1, BSCL2, DNAJB2, DNM2, DYNC1H1, EGR2, FGD4, FIG4, GARS, GDAP1, GJB1, GNB4, HARS, HINT1, HSPB1, HSPB8, IGHMBP2, INF2, LITAF, LMNA, LRSAM1, MED25, MFN2, MORC2, MPZ, MTMR2, NDRG1, NEFL, PDK3, PLEKHG5, PMP22, PRPS1, PRX, RAB7A, SBF2, SH3TC2, SPG11, TFG, TRIM2, TRPV4, YARS
<input type="radio"/> 03201.1	Add-on preliminary-evidence genes	3	MARS, SLC25A46, SURF1
<input type="radio"/> 03211	Invitae Charcot-Marie-Tooth Disease Autosomal Dominant Panel	24	AARS, BSCL2, DNM2, DYNC1H1, EGR2, GARS, GDAP1, GNB4, HARS, HSPB1, HSPB8, INF2, LITAF, LMNA, LRSAM1, MFN2, MORC2, MPZ, NEFL, PMP22, RAB7A, TFG, TRPV4, YARS
<input type="radio"/> 03211.1	Add-on preliminary-evidence gene	1	MARS

**CLINICAL AREA: NEUROLOGY (continued)**

Test code	Test name	# gene(s)	Gene list
<b>Neuropathies and Related Disorders (continued)</b>			
<input type="radio"/> 03212	Invitae Charcot-Marie-Tooth Disease Autosomal Recessive Panel	20	DNAJB2, EGR2, FGD4, FIG4, GDAP1, HINT1, IGHMBP2, LMNA, LRSAM1, MED25, MFN2, MTMR2, NDRG1, NEFL, PLEKHG5, PRX, SBF2, SH3TC2, SPG11, TRIM2
<input type="radio"/> 03212.1	Add-on preliminary-evidence genes	2	SLC25A46, SURF1
<input type="radio"/> 03213	Invitae Charcot-Marie-Tooth Disease X-linked Panel	4	AIFM1, GJB1, PDK3, PRPS1
<input type="radio"/> 03230	Invitae Hereditary Sensory and Autonomic Neuropathy Panel	15	ATL1, ATL3, DNMT1, DST, FAM134B, IKBKAP, KIF1A, NGF, NTRK1, RAB7A, SCN11A, SCN9A, SPTLC1, SPTLC2, WNK1
<input type="radio"/> 03230.1	Add-on preliminary-evidence genes	2	CCT5, PRDM12
<input type="radio"/> 03461	Invitae Familial Dysautonomia Test	1	IKBKAP
<input type="radio"/> 03240	Invitae Hereditary Motor Neuropathies Panel	22	ATP7A, BICD2, BSCL2, CHCHD10, DCTN1, DNAJB2, DYNC1H1, FBXO38, GARS, HINT1, HSPB1, HSPB8, IGHMBP2, PLEKHG5, REEP1, SIGMAR1, SLC5A7, SMN1, SMN2, TRPV4, UBA1, VAPB
<input type="radio"/> 03240.1	Add-on preliminary-evidence genes	2	HSPB3, VRK1
<input type="radio"/> 03245	Invitae Spinal Muscular Atrophy Panel	2	SMN1, SMN2
<input type="radio"/> 03220	Invitae Small Fiber Neuropathy Test	1	SCN9A
<input type="radio"/> 03220.1	Add-on preliminary-evidence gene	1	SCN10A
<input type="radio"/> 03270	Invitae Riboflavin Transporter Deficiency Neuronopathy Panel	2	SLC52A2, SLC52A3
<input type="radio"/> 03251	Invitae Hereditary Spastic Paraplegia Comprehensive Panel	43	ABCD1, ALDH18A1, ALS2, AP4B1, AP4E1, AP4M1, AP4S1, AP5Z1, ATL1, B4GALNT1, BSCL2, C12orf65, CYP2U1, CYP7B1, DDHD1, DDHD2, ERLIN2, FA2H, GBA2, GJC2, HSPD1, KDM5C, KIF1A, KIF1C, KIF5A, L1CAM, NIPA1, NT5C2, PLP1, PNPLA6, REEP1, RTN2, SACS, SLC16A2, SPAST, SPG11, SPG20, SPG21, SPG7, TECPR2, VAMP1, WASHC5, ZFYVE26
<input type="radio"/> 03251.1	Add-on preliminary-evidence genes	21	AMPD2, ARL6IP1, ARSI, ATP13A2, C19orf12, CCT5, CPT1C, ENTPD1, ERLIN1, EXOSC3, IBA57, MAG, PGAP1, RAB3GAP2, REEP2, SLC33A1, TFG, USP8, VPS37A, ZFR, ZFYVE27
<input type="radio"/> 03261	Invitae Hereditary Spastic Paraplegia Autosomal Dominant Panel	12	ALDH18A1, ATL1, BSCL2, HSPD1, KIF1A, KIF5A, NIPA1, REEP1, RTN2, SPAST, VAMP1, WASHC5
<input type="radio"/> 03261.1	Add-on preliminary-evidence genes	4	CPT1C, REEP2, SLC33A1, ZFYVE27
<input type="radio"/> 03262	Invitae Hereditary Spastic Paraplegia Autosomal Recessive Panel	28	ALDH18A1, ALS2, AP4B1, AP4E1, AP4M1, AP4S1, AP5Z1, B4GALNT1, C12orf65, CYP2U1, CYP7B1, DDHD1, DDHD2, ERLIN2, FA2H, GBA2, GJC2, KIF1A, KIF1C, NT5C2, PNPLA6, SACS, SPG11, SPG20, SPG21, SPG7, TECPR2, ZFYVE26
<input type="radio"/> 03262.1	Add-on preliminary-evidence genes	18	AMPD2, ARL6IP1, ARSI, ATP13A2, C19orf12, CCT5, ENTPD1, ERLIN1, EXOSC3, IBA57, MAG, PGAP1, RAB3GAP2, REEP2, TFG, USP8, VPS37A, ZFR
<input type="radio"/> 03263	Invitae Hereditary Spastic Paraplegia X-linked Panel	5	ABCD1, KDM5C, L1CAM, PLP1, SLC16A2

## CLINICAL AREA: NEUROLOGY (continued)

Test code	Test name	# gene(s)	Gene list
<b>Cardiomyopathy and Skeletal Muscle Disease</b>			
<input type="radio"/> 02252	Invitae Cardiomyopathy and Skeletal Muscle Disease Panel	113	ABCC9, ACTA1, ACTC1, ACTN2, AGL, ANO5, ATP2A1, B3GALNT2, B4GAT1, BAG3, BIN1, CACNA1C, CAPN3, CAV3, CCDC78, CFL2, CHKB, CNTN1, COL6A1, COL6A2, COL6A3, CPT2, CRYAB, CSRP3, DAG1, DES, DMD, DNAJB6, DNM2, DOLK, DPM1, DPM2, DPM3, DSC2, DSG2, DSP, DYSF, EMD, EYA4, FHL1, FKBP14, FKRP, FKTN, FLNC, GAA, GLA, GMPPB, GNE, HCN4, ISPD, ITGA7, JUP, KBTBD13, KLHL40, KLHL41, LAMA2, LAMP2, LARGE1, LMNA, LMOD3, MATR3, MEGF10, MTM1, MYBPC3, MYH7, MYL2, MYL3, MYOT, MYPN, NEB, PKP2, PLEC, PLN, PNPLA2, POMGNT1, POMGNT2, POMK, POMT1, POMT2, PRKAG2, RAF1, RBM20, RYR1, RYR2, SCN5A, SELENON, SGCA, SGCB, SGCD, SGCG, SLC22A5, SQSTM1, STAC3, STIM1, TAZ, TCAP, TIA1, TMEM43, TMEM5, TNNC1, TNNI3, TNNT1, TNNT2, TNPO3, TPM1, TPM2, TPM3, TRAPPC11, TRIM32, TTN, TTR, VCL, VCP
<input type="radio"/> 02252.1	Add-on preliminary-evidence genes	38	ANKRD1, CALR3, CHRM2, COL12A1, CTF1, CTNNA3, DTNA, FHL2, GATA4, GATA6, GATAD1, HNRNPDL, ILK, JPH2, LAMA4, LDB3, LIMS2, LRRRC10, MYF6, MYH6, MYLK2, MYOM1, MYOZ2, NEBL, NEXN, NKX2-5, NPPA, PDLIM3, PLEKHM2, PRDM16, SUN1, SUN2, SYNE1, SYNE2, TGFB3, TMPO, TOR1AIP1, TXNRD2
<input type="radio"/> 02252.2	Add-on autosomal recessive syndromic pediatric cardiomyopathy genes	7	ACADVL, ALMS1, DNAJC19, ELAC2, MTO1, SDHA, TMEM70

### NEUROLOGY INDIVIDUAL GENES

<input type="radio"/> A2ML1	<input type="radio"/> ANO3	<input type="radio"/> BMPR2	<input type="radio"/> CHD7	<input type="radio"/> CRTAP	<input type="radio"/> DPM3	<input type="radio"/> FBXO7	<input type="radio"/> GJA1
<input type="radio"/> AARS	<input type="radio"/> ANO5	<input type="radio"/> BRAF	<input type="radio"/> CHKB	<input type="radio"/> CRYAB	<input type="radio"/> DRD2	<input type="radio"/> FGD4	<input type="radio"/> GJA5
<input type="radio"/> ABCC9	<input type="radio"/> AP4B1	<input type="radio"/> BSCL2	<input type="radio"/> CHMP2B	<input type="radio"/> CSRP3	<input type="radio"/> DSC2	<input type="radio"/> FHL1	<input type="radio"/> GJB1
<input type="radio"/> ABCD1	<input type="radio"/> AP4E1	<input type="radio"/> C12orf65	<input type="radio"/> CHRM2	<input type="radio"/> CTF1	<input type="radio"/> DSG2	<input type="radio"/> FHL2	<input type="radio"/> GJC2
<input type="radio"/> ACADVL	<input type="radio"/> AP4M1	<input type="radio"/> C19orf12	<input type="radio"/> CHRNA1	<input type="radio"/> CTNNA3	<input type="radio"/> DSP	<input type="radio"/> FIG4	<input type="radio"/> GLA
<input type="radio"/> ACTA1	<input type="radio"/> AP4S1	<input type="radio"/> CACNA1C	<input type="radio"/> CHRN1	<input type="radio"/> CYP2U1	<input type="radio"/> DST	<input type="radio"/> FKBP14	<input type="radio"/> GMPPB
<input type="radio"/> ACTA2	<input type="radio"/> AP5Z1	<input type="radio"/> CACNA1S	<input type="radio"/> CHRND	<input type="radio"/> CYP7B1	<input type="radio"/> DTNA	<input type="radio"/> FKRP	<input type="radio"/> GNAL
<input type="radio"/> ACTB	<input type="radio"/> APOB	<input type="radio"/> CACNA2D1	<input type="radio"/> CHRNE	<input type="radio"/> DAG1	<input type="radio"/> DYNC1H1	<input type="radio"/> FKTN	<input type="radio"/> GNB4
<input type="radio"/> ACTC1	<input type="radio"/> APP	<input type="radio"/> CACNB2	<input type="radio"/> CHST14	<input type="radio"/> DCTN1	<input type="radio"/> DYSF	<input type="radio"/> FLNA	<input type="radio"/> GNE
<input type="radio"/> ACTN2	<input type="radio"/> ARL6IP1	<input type="radio"/> CALM1	<input type="radio"/> CIZ1	<input type="radio"/> DDHD1	<input type="radio"/> EFEMP2	<input type="radio"/> FLNC	<input type="radio"/> GPC3
<input type="radio"/> ACVR2B	<input type="radio"/> ARSI	<input type="radio"/> CALM2	<input type="radio"/> CLCN1	<input type="radio"/> DDHD2	<input type="radio"/> EGR2	<input type="radio"/> FLRT1	<input type="radio"/> GPD1L
<input type="radio"/> ACVRL1	<input type="radio"/> ATL1	<input type="radio"/> CALM3	<input type="radio"/> CNTN1	<input type="radio"/> DEPDC5	<input type="radio"/> ELAC2	<input type="radio"/> FOXH1	<input type="radio"/> GRN
<input type="radio"/> ADAMTS2	<input type="radio"/> ATL3	<input type="radio"/> CALR3	<input type="radio"/> COL12A1	<input type="radio"/> DES	<input type="radio"/> ELN	<input type="radio"/> FUS	<input type="radio"/> HAMP
<input type="radio"/> AGL	<input type="radio"/> ATP13A2	<input type="radio"/> CAPN3	<input type="radio"/> COL1A1	<input type="radio"/> DMD	<input type="radio"/> EMD	<input type="radio"/> GAA	<input type="radio"/> HAND1
<input type="radio"/> AGRN	<input type="radio"/> ATP1A3	<input type="radio"/> CASQ2	<input type="radio"/> COL1A2	<input type="radio"/> DNAJB2	<input type="radio"/> ENG	<input type="radio"/> GAN	<input type="radio"/> HARS
<input type="radio"/> AIFM1	<input type="radio"/> ATP2A1	<input type="radio"/> CAV1	<input type="radio"/> COL3A1	<input type="radio"/> DNAJB6	<input type="radio"/> ENTPD1	<input type="radio"/> GARS	<input type="radio"/> HCN4
<input type="radio"/> AKAP9	<input type="radio"/> ATP7A	<input type="radio"/> CAV3	<input type="radio"/> COL5A1	<input type="radio"/> DNAJC19	<input type="radio"/> ERLIN1	<input type="radio"/> GATA4	<input type="radio"/> HFE
<input type="radio"/> ALDH18A1	<input type="radio"/> B3GALNT2	<input type="radio"/> CBL	<input type="radio"/> COL5A2	<input type="radio"/> DNAJC6	<input type="radio"/> ERLIN2	<input type="radio"/> GATA6	<input type="radio"/> HFE2
<input type="radio"/> ALG14	<input type="radio"/> B4GALNT1	<input type="radio"/> CBS	<input type="radio"/> COL6A1	<input type="radio"/> DNM2	<input type="radio"/> EXOSC3	<input type="radio"/> GATAD1	<input type="radio"/> HINT1
<input type="radio"/> ALG2	<input type="radio"/> B4GAT1	<input type="radio"/> CCDC78	<input type="radio"/> COL6A2	<input type="radio"/> DNMT1	<input type="radio"/> EYA4	<input type="radio"/> GBA2	<input type="radio"/> HNRNPA2B1
<input type="radio"/> ALMS1	<input type="radio"/> BAG3	<input type="radio"/> CCT5	<input type="radio"/> COL6A3	<input type="radio"/> DOK7	<input type="radio"/> FA2H	<input type="radio"/> GCH1	<input type="radio"/> HNRNPDL
<input type="radio"/> ALS2	<input type="radio"/> BCOR	<input type="radio"/> CFL2	<input type="radio"/> COLQ	<input type="radio"/> DOLK	<input type="radio"/> FAM134B	<input type="radio"/> GDAP1	<input type="radio"/> HPCA
<input type="radio"/> AMPD2	<input type="radio"/> BICD2	<input type="radio"/> CHAT	<input type="radio"/> CPT1C	<input type="radio"/> DPAGT1	<input type="radio"/> FBN1	<input type="radio"/> GDF1	<input type="radio"/> HRAS
<input type="radio"/> ANK2	<input type="radio"/> BIN1	<input type="radio"/> CHCHD10	<input type="radio"/> CPT2	<input type="radio"/> DPM1	<input type="radio"/> FBN2	<input type="radio"/> GDF2	<input type="radio"/> HSPB1
<input type="radio"/> ANKRD1	<input type="radio"/> BMPR1B	<input type="radio"/> CHCHD2	<input type="radio"/> CRELD1	<input type="radio"/> DPM2	<input type="radio"/> FBXO38	<input type="radio"/> GFPT1	<input type="radio"/> HSPB3

**NEUROLOGY INDIVIDUAL GENES (continued)**

<input type="radio"/> HSPB8	<input type="radio"/> LAMB2	<input type="radio"/> MYH7	<input type="radio"/> PKP2	<input type="radio"/> RTN2	<input type="radio"/> SLC6A3	<input type="radio"/> TGFB2	<input type="radio"/> VPS35
<input type="radio"/> HSPD1	<input type="radio"/> LAMP2	<input type="radio"/> MYL2	<input type="radio"/> PLEC	<input type="radio"/> RYR1	<input type="radio"/> SLMAP	<input type="radio"/> TGFB3	<input type="radio"/> VPS37A
<input type="radio"/> IBA57	<input type="radio"/> LARGE1	<input type="radio"/> MYL3	<input type="radio"/> PLEKHG5	<input type="radio"/> RYR2	<input type="radio"/> SMAD3	<input type="radio"/> TGFBRI	<input type="radio"/> VRK1
<input type="radio"/> IGHMBP2	<input type="radio"/> LAS1L	<input type="radio"/> MYL4	<input type="radio"/> PLEKHM2	<input type="radio"/> SACS	<input type="radio"/> SMAD4	<input type="radio"/> TGFBRI2	<input type="radio"/> WASHC5
<input type="radio"/> IKBKAP	<input type="radio"/> LDB3	<input type="radio"/> MYLK	<input type="radio"/> PLN	<input type="radio"/> SBF2	<input type="radio"/> SMAD6	<input type="radio"/> TH	<input type="radio"/> WNK1
<input type="radio"/> ILK	<input type="radio"/> LDLR	<input type="radio"/> MYLK2	<input type="radio"/> PLOD1	<input type="radio"/> SCN10A	<input type="radio"/> SMAD9	<input type="radio"/> THAP1	<input type="radio"/> YARS
<input type="radio"/> INF2	<input type="radio"/> LDLRAP1	<input type="radio"/> MYOM1	<input type="radio"/> PLP1	<input type="radio"/> SCN11A	<input type="radio"/> SMCHD1	<input type="radio"/> TIA1	<input type="radio"/> ZFPM2
<input type="radio"/> ISPD	<input type="radio"/> LEFTY2	<input type="radio"/> MYOT	<input type="radio"/> PMP22	<input type="radio"/> SCN1A	<input type="radio"/> SMN1, SMN2	<input type="radio"/> TMEM43	<input type="radio"/> ZFR
<input type="radio"/> ITGA7	<input type="radio"/> LIMS2	<input type="radio"/> MYOZ2	<input type="radio"/> PNKD	<input type="radio"/> SCN1B	<input type="radio"/> SNAP25	<input type="radio"/> TMEM5	<input type="radio"/> ZFYVE26
<input type="radio"/> JAG1	<input type="radio"/> LITAF	<input type="radio"/> MYPN	<input type="radio"/> PNPLA2	<input type="radio"/> SCN2B	<input type="radio"/> SNCA	<input type="radio"/> TMEM70	<input type="radio"/> ZFYVE27
<input type="radio"/> JPH2	<input type="radio"/> LMNA	<input type="radio"/> NDRG1	<input type="radio"/> PNPLA6	<input type="radio"/> SCN3B	<input type="radio"/> SNTA1	<input type="radio"/> TMPO	<input type="radio"/> ZIC3
<input type="radio"/> JUP	<input type="radio"/> LMOD3	<input type="radio"/> NEB	<input type="radio"/> POMGNT1	<input type="radio"/> SCN4A	<input type="radio"/> SOD1	<input type="radio"/> TNNC1	
<input type="radio"/> KBTBD13	<input type="radio"/> LRP4	<input type="radio"/> NEBL	<input type="radio"/> POMGNT2	<input type="radio"/> SCN4B	<input type="radio"/> SOS1	<input type="radio"/> TNNI3	
<input type="radio"/> KCNA5	<input type="radio"/> LRRIC10	<input type="radio"/> NEFL	<input type="radio"/> POMK	<input type="radio"/> SCN5A	<input type="radio"/> SOS2	<input type="radio"/> TNNT1	
<input type="radio"/> KCND3	<input type="radio"/> LRRK2	<input type="radio"/> NEXN	<input type="radio"/> POMT1	<input type="radio"/> SCN8A	<input type="radio"/> SPAST	<input type="radio"/> TNNT2	
<input type="radio"/> KCNE1	<input type="radio"/> LRSAM1	<input type="radio"/> NF1	<input type="radio"/> POMT2	<input type="radio"/> SCN9A	<input type="radio"/> SPG11	<input type="radio"/> TNPO3	
<input type="radio"/> KCNE2	<input type="radio"/> MAG	<input type="radio"/> NGF	<input type="radio"/> PRDM12	<input type="radio"/> SDHA	<input type="radio"/> SPG20	<input type="radio"/> TOR1A	
<input type="radio"/> KCNE3	<input type="radio"/> MAP2K1	<input type="radio"/> NIPA1	<input type="radio"/> PRDM16	<input type="radio"/> SELENON	<input type="radio"/> SPG21	<input type="radio"/> TOR1AIP1	
<input type="radio"/> KCNE5	<input type="radio"/> MAP2K2	<input type="radio"/> NKX2-5	<input type="radio"/> PREPL	<input type="radio"/> SETX	<input type="radio"/> SPG7	<input type="radio"/> TPM1	
<input type="radio"/> KCNH2	<input type="radio"/> MAPT	<input type="radio"/> NKX2-6	<input type="radio"/> PRKAG2	<input type="radio"/> SGCA	<input type="radio"/> SPR	<input type="radio"/> TPM2	
<input type="radio"/> KCNJ2	<input type="radio"/> MARS	<input type="radio"/> NODAL	<input type="radio"/> PRKG1	<input type="radio"/> SGCB	<input type="radio"/> SPRED1	<input type="radio"/> TPM3	
<input type="radio"/> KCNJ5	<input type="radio"/> MAT2A	<input type="radio"/> NOTCH1	<input type="radio"/> PRKRA	<input type="radio"/> SGCD	<input type="radio"/> SPTLC1	<input type="radio"/> TRAPPC11	
<input type="radio"/> KCNJ8	<input type="radio"/> MATR3	<input type="radio"/> NPPA	<input type="radio"/> PRNP	<input type="radio"/> SGCE	<input type="radio"/> SPTLC2	<input type="radio"/> TRDN	
<input type="radio"/> KCNK3	<input type="radio"/> MED12	<input type="radio"/> NR2F2	<input type="radio"/> PRPS1	<input type="radio"/> SGCG	<input type="radio"/> SQSTM1	<input type="radio"/> TRIM2	
<input type="radio"/> KCNQ1	<input type="radio"/> MED13L	<input type="radio"/> NRAS	<input type="radio"/> PRRT2	<input type="radio"/> SH3TC2	<input type="radio"/> STAC3	<input type="radio"/> TRIM32	
<input type="radio"/> KCNQ2	<input type="radio"/> MED25	<input type="radio"/> NSD1	<input type="radio"/> PRX	<input type="radio"/> SHOC2	<input type="radio"/> STIM1	<input type="radio"/> TRPM4	
<input type="radio"/> KCNQ3	<input type="radio"/> MEGF10	<input type="radio"/> NT5C2	<input type="radio"/> PSEN1	<input type="radio"/> SIGMAR1	<input type="radio"/> SUN1	<input type="radio"/> TRPV4	
<input type="radio"/> KCNT1	<input type="radio"/> MFN2	<input type="radio"/> NTRK1	<input type="radio"/> PSEN2	<input type="radio"/> SKI	<input type="radio"/> SUN2	<input type="radio"/> TTN	
<input type="radio"/> KCTD17	<input type="radio"/> MORC2	<input type="radio"/> OPTN	<input type="radio"/> PTPN11	<input type="radio"/> SLC16A2	<input type="radio"/> SURF1	<input type="radio"/> TTR	
<input type="radio"/> KDM5C	<input type="radio"/> MPZ	<input type="radio"/> P3H1	<input type="radio"/> RAB3GAP2	<input type="radio"/> SLC22A5	<input type="radio"/> SYNE1	<input type="radio"/> TUBB4A	
<input type="radio"/> KIF1A	<input type="radio"/> MTM1	<input type="radio"/> PARK2	<input type="radio"/> RAB7A	<input type="radio"/> SLC25A46	<input type="radio"/> SYNE2	<input type="radio"/> TXNRD2	
<input type="radio"/> KIF1C	<input type="radio"/> MTMR2	<input type="radio"/> PARK7	<input type="radio"/> RAF1	<input type="radio"/> SLC2A1	<input type="radio"/> TARDBP	<input type="radio"/> UBA1	
<input type="radio"/> KIF5A	<input type="radio"/> MTO1	<input type="radio"/> PCDH19	<input type="radio"/> RANGRF	<input type="radio"/> SLC2A10	<input type="radio"/> TAZ	<input type="radio"/> UBQLN2	
<input type="radio"/> KLHL40	<input type="radio"/> MUSK	<input type="radio"/> PCSK9	<input type="radio"/> RAPSN	<input type="radio"/> SLC33A1	<input type="radio"/> TBK1	<input type="radio"/> USP8	
<input type="radio"/> KLHL41	<input type="radio"/> MYBPC3	<input type="radio"/> PDK3	<input type="radio"/> RASA1	<input type="radio"/> SLC39A13	<input type="radio"/> TBX5	<input type="radio"/> VAMP1	
<input type="radio"/> KRAS	<input type="radio"/> MYF6	<input type="radio"/> PDLIM3	<input type="radio"/> RBM20	<input type="radio"/> SLC40A1	<input type="radio"/> TCAP	<input type="radio"/> VAPB	
<input type="radio"/> L1CAM	<input type="radio"/> MYH11	<input type="radio"/> PFN1	<input type="radio"/> REEP1	<input type="radio"/> SLC52A2	<input type="radio"/> TECPR2	<input type="radio"/> VCL	
<input type="radio"/> LAMA2	<input type="radio"/> MYH2	<input type="radio"/> PGAP1	<input type="radio"/> REEP2	<input type="radio"/> SLC52A3	<input type="radio"/> TFG	<input type="radio"/> VCP	
<input type="radio"/> LAMA4	<input type="radio"/> MYH6	<input type="radio"/> PINK1	<input type="radio"/> RIT1	<input type="radio"/> SLC5A7	<input type="radio"/> TFR2	<input type="radio"/> VMA21	

## CLINICAL AREA: PEDIATRIC AND RARE DISEASE

Test code	Test name	# gene(s)	Gene list
<b>Epilepsy, Seizures, and Developmental Brain Abnormalities</b>			
<input type="radio"/> 03401	Invitae Epilepsy Panel	125	ADSL, ALDH5A1, ALDH7A1, ALG13, ARHGEF9, ARX, ATP1A2, ATP1A3, ATRX, BRAT1, C12orf57, CACNA2D2, CASK, CDKL5, CHD2, CHRNA2, CHRNA4, CHRN2, CLN2 (TPP1), CLN3, CLN5, CLN6, CLN8, CNTNAP2, CSTB, CTSD, DEPDC5, DNAJC5, DNMT1, DYRK1A, EEF1A2, EFHC1, EHMT1, EPM2A, FOLR1, FOXG1, FRRS1L, GABRA1, GABRB3, GABRG2, GAMT, GATM, GLRA1, GNAO1, GOSR2, GRIN1, GRIN2A, GRIN2B, HCN1, HNRNPU, IER3IP1, IQSEC2, ITPA, KANSL1, KCNA2, KCNB1, KCNC1, KCNH2, KCNJ10, KCNQ2, KCNQ3, KCNT1, KCTD7, KIAA2022, LGI1, LIAS, MBD5, MECP2, MEF2C, MFS2D, NGLY1, NHLRC1, NRXN1, PACS1, PCDH19, PIGA, PIGN, PIGO, PLCB1, PNKD, PNKP, PNPO, POLG, PPT1, PRICKLE1, PRRT2, PURA, QARS, ROGDI, SATB2, SCARB2, SCN1A, SCN1B, SCN2A, SCN3A, SCN8A, SCN9A, SERPINI1, SGCE, SLC13A5, SLC19A3, SLC25A22, SLC2A1, SLC35A2, SLC6A1, SLC6A8, SLC9A6, SMC1A, SNX27, SPATA5, SPTAN1, STXB1, STXB1B, SYN1, SYNJ1, SYNGAP1, SZT2, TBC1D24, TCF4, TSC1, TSC2, UBE3A, WWOX, ZDHHC9, ZEB2
<input type="radio"/> 03401.1	Add-on preliminary-evidence genes	58	ABAT, ARHGEF15, ATP6AP2, CACNA1A, CACNA1H, CACNB4, CARS2, CASR, CBL, CERS1, CLCN4, CNTN2, COQ4, CPA6, DIAPH1, DOCK7, FARS2, FASN, GABBR2, GABRB2, GABRD, GAL, GPHN, JMJD1C, KCNA1, KCND2, KCNH5, KCNMA1, KPNA7, LMNB2, MTOR, NECAP1, NEDD4L, NPRL3, PIGG, PIGQ, PIK3AP1, PRDM8, PRICKLE2, PRIMA1, RBFOX1, RBFOX3, RELN, RYR3, SCN5A, SETD2, SIK1, SLC12A5, SLC25A12, SLC35A3, SNAP25, SRPX2, ST3GAL3, ST3GAL5, STRADA, TBL1XR1, TPK1, WDR45
<input type="radio"/> 03401.2	Add-on genes for glycine encephalopathy	3	AMT, GCSH, GLDC
<input type="radio"/> 03401.3	Add-on FLNA gene	1	FLNA
<input type="radio"/> 03401.4	Add-on PTEN gene	1	PTEN
<input type="radio"/> 03401.5	Add-on RANBP2 gene	1	RANBP2
<input type="radio"/> 03407	Invitae Alternating Hemiplegia of Childhood Panel	2	ATP1A2, ATP1A3
<input type="radio"/> 03407.1	Add-on clinically overlapping Genes	3	CACNA1A, SCN1A, SLC2A1
<input type="radio"/> 04741	Invitae Baraitser-Winter Cerebrofrontofacial Syndrome Panel	2	ACTB, ACTG1
<input type="radio"/> 04422	Invitae Cerebral Cavernous Malformations Panel	3	CCM2, KRIT1, PDCD10
<input type="radio"/> 04211	Invitae CHARGE Syndrome Test	1	CHD7
<input type="radio"/> 03402	Invitae Early Infantile Epileptic Encephalopathy Panel	49	ALDH7A1, ARHGEF9, ARX, BRAT1, CACNA2D2, CASK, CDKL5, CHD2, DNMT1, EEF1A2, FOLR1, FRRS1L, GABRA1, GABRB3, GNAO1, GRIN1, GRIN2B, HCN1, HNRNPU, IER3IP1, KCNA2, KCNB1, KCNQ2, KCNQ3, KCNT1, PCDH19, PIGA, PIGN, PIGO, PLCB1, PNKP, PNPO, PURA, SCN1A, SCN2A, SCN8A, SCN9A, SLC2A1, SLC13A5, SLC25A22, SLC35A2, SLC6A1, SMC1A, SPTAN1, STXB1, SYNGAP1, SZT2, TBC1D24, WWOX
<input type="radio"/> 03402.1	Add-on preliminary-evidence genes	14	ARHGEF15, CLCN4, COQ4, DOCK7, GABBR2, GPHN, KCNH5, MTOR, NECAP1, NEDD4L, SCN1B, SIK1, SLC12A5, ST3GAL3
<input type="radio"/> 04424	Invitae Holoprosencephaly Panel	5	GLI2, SHH, SIX3, TGIF1, ZIC2
<input type="radio"/> 04424.1	Add-on preliminary-evidence genes	4	CDON, FOXH1, NODAL, PTCH1
<input type="radio"/> 03414	Invitae Neurodegeneration with Brain Iron Accumulation Panel	11	ATP13A2, C19orf12, COASY, CP, DCAF17, FTL, FUCA1, PANK2, PLA2G6, SQSTM1, WDR45
<input type="radio"/> 03414.1	Add-on preliminary-evidence genes	3	FA2H, KIF1A, TRIM32
<input type="radio"/> 03404	Invitae Rett/Angelman and Related Disorders Panel	22	ADSL, ALDH5A1, ATRX, CDKL5, CNTNAP2, DYRK1A, EHMT1, FOXG1, IQSEC2, KANSL1, MBD5, MECP2, MEF2C, NGLY1, NRXN1, SATB2, SCN8A, SLC9A6, STXB1, TCF4, UBE3A, ZEB2
<input type="radio"/> 03404.1	Add-on preliminary-evidence genes	4	GABRD, TBL1XR1, JMJD1C, WDR45
<input type="radio"/> 01721	Invitae Tuberous Sclerosis Complex Panel	2	TSC1, TSC2



**EPILEPSY, SEIZURES, AND DEVELOPMENTAL BRAIN ABNORMALITIES INDIVIDUAL GENES**

<input type="radio"/> ABAT	<input type="radio"/> CDKL5	<input type="radio"/> DYNC1H1	<input type="radio"/> GLRA1	<input type="radio"/> KIF1A	<input type="radio"/> PLA2G6	<input type="radio"/> SCN5A	<input type="radio"/> ST3GAL5
<input type="radio"/> ACTB	<input type="radio"/> CDON	<input type="radio"/> DYRK1A	<input type="radio"/> GNAO1	<input type="radio"/> KPNA7	<input type="radio"/> PLCB1	<input type="radio"/> SCN8A	<input type="radio"/> STRADA
<input type="radio"/> ACTG1	<input type="radio"/> CERS1	<input type="radio"/> EEF1A2	<input type="radio"/> GOSR2	<input type="radio"/> KRIT1	<input type="radio"/> PNKD	<input type="radio"/> SCN9A	<input type="radio"/> STX1B
<input type="radio"/> ADSL	<input type="radio"/> CHD2	<input type="radio"/> EFHC1	<input type="radio"/> GPHN	<input type="radio"/> LGI1	<input type="radio"/> PNKP	<input type="radio"/> SERPINI1	<input type="radio"/> STXBP1
<input type="radio"/> ALDH5A1	<input type="radio"/> CHD7	<input type="radio"/> EHMT1	<input type="radio"/> GRIN1	<input type="radio"/> LIAS	<input type="radio"/> PNPO	<input type="radio"/> SETD2	<input type="radio"/> SYN1
<input type="radio"/> ALDH7A1	<input type="radio"/> CHRNA2	<input type="radio"/> EPM2A	<input type="radio"/> GRIN2A	<input type="radio"/> LMNB2	<input type="radio"/> POLG	<input type="radio"/> SGCE	<input type="radio"/> SYNGAP1
<input type="radio"/> ALG13	<input type="radio"/> CHRNA4	<input type="radio"/> FA2H	<input type="radio"/> GRIN2B	<input type="radio"/> MBD5	<input type="radio"/> PPT1	<input type="radio"/> SHH	<input type="radio"/> SYNJ1
<input type="radio"/> AMT	<input type="radio"/> CHRNB2	<input type="radio"/> FARS2	<input type="radio"/> HCN1	<input type="radio"/> MECP2	<input type="radio"/> PRDM8	<input type="radio"/> SIK1	<input type="radio"/> SZT2
<input type="radio"/> ARHGEF15	<input type="radio"/> CLCN4	<input type="radio"/> FASN	<input type="radio"/> HNRNPU	<input type="radio"/> MEF2C	<input type="radio"/> PRICKLE1	<input type="radio"/> SIX3	<input type="radio"/> TBC1D24
<input type="radio"/> ARHGEF9	<input type="radio"/> CLN2 (TPP1)	<input type="radio"/> FOLR1	<input type="radio"/> IER3IP1	<input type="radio"/> MFSB8	<input type="radio"/> PRICKLE2	<input type="radio"/> SLC12A5	<input type="radio"/> TBL1XR1
<input type="radio"/> ARX	<input type="radio"/> CLN3	<input type="radio"/> FOXG1	<input type="radio"/> IQSEC2	<input type="radio"/> MTOR	<input type="radio"/> PRIMA1	<input type="radio"/> SLC13A5	<input type="radio"/> TCF4
<input type="radio"/> ATP13A2	<input type="radio"/> CLN5	<input type="radio"/> FOXH1	<input type="radio"/> ITPA	<input type="radio"/> NECAP1	<input type="radio"/> PRRT2	<input type="radio"/> SLC19A3	<input type="radio"/> TGIF1
<input type="radio"/> ATP1A2	<input type="radio"/> CLN6	<input type="radio"/> FRRS1L	<input type="radio"/> JMJD1C	<input type="radio"/> NEDD4L	<input type="radio"/> PTCH1	<input type="radio"/> SLC25A12	<input type="radio"/> TPK1
<input type="radio"/> ATP1A3	<input type="radio"/> CLN8	<input type="radio"/> FTL	<input type="radio"/> KANSL1	<input type="radio"/> NGLY1	<input type="radio"/> PTEN	<input type="radio"/> SLC25A22	<input type="radio"/> TRIM32
<input type="radio"/> ATP6AP2	<input type="radio"/> CNTN2	<input type="radio"/> FUCA1	<input type="radio"/> KCNA1	<input type="radio"/> NHLRC1	<input type="radio"/> PURA	<input type="radio"/> SLC2A1	<input type="radio"/> TSC1
<input type="radio"/> ATRX	<input type="radio"/> CNTNAP2	<input type="radio"/> GABBR2	<input type="radio"/> KCNA2	<input type="radio"/> NODAL	<input type="radio"/> QARS	<input type="radio"/> SLC35A2	<input type="radio"/> TSC2
<input type="radio"/> BRAT1	<input type="radio"/> COASY	<input type="radio"/> GABRA1	<input type="radio"/> KCNB1	<input type="radio"/> NPRL3	<input type="radio"/> RANBP2	<input type="radio"/> SLC35A3	<input type="radio"/> UBE3A
<input type="radio"/> C12orf57	<input type="radio"/> COQ4	<input type="radio"/> GABRA6	<input type="radio"/> KCNC1	<input type="radio"/> NRXN1	<input type="radio"/> RBFox1	<input type="radio"/> SLC6A1	<input type="radio"/> WDR45
<input type="radio"/> C19orf12	<input type="radio"/> CP	<input type="radio"/> GABRB2	<input type="radio"/> KCND2	<input type="radio"/> PACS1	<input type="radio"/> RBFox3	<input type="radio"/> SLC6A8	<input type="radio"/> WWOX
<input type="radio"/> CACNA1A	<input type="radio"/> CPA6	<input type="radio"/> GABRB3	<input type="radio"/> KCNH2	<input type="radio"/> PANK2	<input type="radio"/> RELN	<input type="radio"/> SLC9A6	<input type="radio"/> ZDHHC9
<input type="radio"/> CACNA1H	<input type="radio"/> CSTB	<input type="radio"/> GABRD	<input type="radio"/> KCNH5	<input type="radio"/> PCDH19	<input type="radio"/> ROGD1	<input type="radio"/> SMC1A	<input type="radio"/> ZEB2
<input type="radio"/> CACNA2D2	<input type="radio"/> CTSD	<input type="radio"/> GABRG2	<input type="radio"/> KCNJ10	<input type="radio"/> PDCD10	<input type="radio"/> RYR3	<input type="radio"/> SNAP25	<input type="radio"/> ZIC2
<input type="radio"/> CACNB4	<input type="radio"/> DCAF17	<input type="radio"/> GAL	<input type="radio"/> KCNMA1	<input type="radio"/> PIGA	<input type="radio"/> SATB2	<input type="radio"/> SNX27	
<input type="radio"/> CARS2	<input type="radio"/> DEPDC5	<input type="radio"/> GAMT	<input type="radio"/> KCNQ2	<input type="radio"/> PIGG	<input type="radio"/> SCARB2	<input type="radio"/> SPATA5	
<input type="radio"/> CASK	<input type="radio"/> DIAPH1	<input type="radio"/> GATM	<input type="radio"/> KCNQ3	<input type="radio"/> PIGN	<input type="radio"/> SCN1A	<input type="radio"/> SPTAN1	
<input type="radio"/> CASR	<input type="radio"/> DNAJC5	<input type="radio"/> GCSH	<input type="radio"/> KCNT1	<input type="radio"/> PIGO	<input type="radio"/> SCN1B	<input type="radio"/> SQSTM1	
<input type="radio"/> CBL	<input type="radio"/> DNMT1	<input type="radio"/> GLDC	<input type="radio"/> KCTD7	<input type="radio"/> PIGQ	<input type="radio"/> SCN2A	<input type="radio"/> SRPX2	
<input type="radio"/> CCM2	<input type="radio"/> DOCK7	<input type="radio"/> GLI2	<input type="radio"/> KIAA2022	<input type="radio"/> PIK3AP1	<input type="radio"/> SCN3A	<input type="radio"/> ST3GAL3	