Autism Partnership Program - SHANK3 Genetic Testing Program Test Requisition Form

GeneDx

GENEDX PROGRAM CODE:

ESAS3

Requirements (all 3 must be met)
Patients being considered for the SHANK3 sponsored genetic testing program must meet these criteria:

- ☐ Have not had prior genetic testing performed by a clinical laboratory that resulted in a confirmed diagnosis of Phelan-McDermid syndrome (PMS; SHANK3 haploinsufficiency).
- ☐ Moderate-to-severe developmental delay, intellectual disability (ID), autism spectrum disorder (ASD), or autistic-like behavior with **clinical suspicion of PMS**.
- ☐ Patient resides in the United States.

PATIENT INFORMATION

First Name	**Last Name**	
Sex Assigned at Birth: ◯ **Male** ◯ **Female** Patient Karyotype (if known): _____ Gender Identification (optional): _____	**Date of Birth (mm/dd/yy)**	
Email		
Address		
City	State	Zip Code
Phone (mobile preferred)		

SAMPLE INFORMATION

Date Sample Collected (mm/dd/yy)	**Medical Record #**

◯ **Blood** ◯ **Buccal Swab** ◯ **Other (specify source):** _____

☐ **Treatment-related RUSH** (optional)
Reason: ◯ Transplantation ◯ Pregnancy ◯ Surgery ◯ Other: _____

Patient has had a blood transfusion ◯ **Yes** ◯ **No** **Date of Last Transfusion:** _____
(2-4 weeks of wait time is required for some testing)

Patient has had an allogeneic bone marrow transplant ◯ **Yes** ◯ **No**
Fibroblasts are required for patients who had an allogeneic bone marrow transplant. See www.genedx.com/specimen-requirements for details.

ORDERING PROVIDER ATTESTATION

By signing this form, the ordering provider attests that (i) he/she authorizes and directs GeneDx to perform the testing indicated; (ii) he/she is the ordering provider and is authorized by law to order the test(s) requested; (iii) any test(s) requested on this Test Requisition Form (TRF) are reasonable and medically necessary for the diagnosis and/or treatment of a disease, illness, impairment, symptom, syndrome or disorder; (iv) the test results will determine the patient's medical management and treatment decisions of this patient's condition on this date of service; (v) the patient is eligible for the Program and (vi) the patient or the individual/family member authorized to make decisions for the patient (collectively, the "patient"), in addition to any relatives', when applicable, has been supplied with information regarding genetic testing, and has consented to undergo genetic testing in connection with the SHANK3 Genetic Testing Program (the "program") and the data practices identified, substantially as set forth in the Informed Consent section on this TRF; and (vii) the full and appropriate diagnosis code(s) are indicated to the highest level of specificity. The ordering provider (i) warrants that he/she will not seek reimbursement from any patient or other third party, including but not limited to federal healthcare programs and (ii) will inform the patient that he/she shall not seek reimbursement from any third party, including but not limited to federal healthcare programs. The ordering provider also hereby acknowledges that organization and contact information for the ordering provider and any other healthcare provider(s) listed on this TRF may be shared with third parties that may contact the ordering provider and other healthcare providers listed on this TRF directly in connection with the program, and that they have made the patient aware that third parties may contact their ordering provider regarding de-identified information gathered through the program.

- ☐ **Secondary Findings Opt-out.** By checking this box, I confirm that the patient does not wish to receive ACMG secondary findings.
- ☐ **New York Retention Opt-In.** By checking this box, I confirm that the patient is a New York State resident who gives permission for GeneDx to retain any remaining sample longer than 60 days after testing has been completed.
- ☐ **Patient Research Opt-Out.** By checking this box, I confirm that the patient wishes to opt out of being contacted for research studies.
- ☐ **Health Information Exchange Opt-in.** Check this box if your patient resides in CA, FL, MA, NV, NY, RI, and VT and wishes to opt-in to having their information shared for Health Information Exchange participation.
- ☐ **Health Information Exchange Opt-out.** Check this box if your patient resides in any other US state or territory and wishes to opt-out of participation in Health Information Exchange.

Signature of Ordering Provider	**Date**

And at least 5 of the following criteria from **at least 2** of the groups below (check all that apply):

Neurology, Neuropsychiatric ☐ Psychiatric manifestations or episodes ☐ Seizures ☐ Regression ☐ Sleep disturbances ☐ Catatonia	**Sensory, Sensory Perception** ☐ Decreased perception of pain (including self-injury) ☐ Decreased response to auditory or visual stimuli ☐ Decreased perspiration/overheating ☐ Pica disorder (and/or mouthing, chewing, or teeth grinding)
Motor ☐ Delayed motor milestones (rolling over, sitting, crawling, walking) ☐ Gross and fine motor impairments ☐ Gait abnormalities	**Language, Communication** ☐ Delayed or absent speech ☐ Speech apraxia
Dysmorphic Features, Musculoskeletal ☐ Dysplastic fingernails or toenails, long eyelashes, large or fleshy hands ☐ Marked hypotonia	**GI, Urinary System Dysfunction** ☐ Bladder or bowel incontinence ☐ Gastroesophageal reflux (including difficulty swallowing) ☐ Dysmotility (including constipation)

ORDERING ACCOUNT INFORMATION

GeneDx Account Number	**Account Name**	
Phone	Fax	
Address		
City	State	Zip Code
Ordering Provider Name		**Role/Title**
NPI	Phone Number	

Send Report Via: ☐ Fax ☐ Email ☐ Portal
Fax #/Email: _____

Additional Ordering Provider Name (optional)	**Role/Title**
NPI	

Send Report Via: ☐ Fax ☐ Email ☐ Portal
Fax #/Email: _____

Additional Ordering Provider Name (optional)	**Role/Title**
NPI	

Send Report Via: ☐ Fax ☐ Email ☐ Portal
Fax #/Email: _____

SEND ADDITIONAL REPORT COPIES TO (optional)

Provider Name	GeneDx Acct#
Fax #/Email:	

PROGRAM BILLING

GeneDx will work with the patient's insurance company to coordinate coverage. Patients typically have out-of-pocket obligations of $250 or less.

◯ **INSURANCE BILL**
Select all that apply
☐ Commercial
☐ Medicaid
☐ Medicare
☐ Tricare
☐ CHAMPVA

FOR ALL INSURANCE PROVIDE FRONT AND BACK COPY OF CARD(S)

Patient Status
Is this individual currently a Hospital Inpatient? ◯ Yes ◯ No
Hospital inpatients are not eligible for this program.

Name of Insurance Carrier	**Insurance ID#:**
Relationship to Insured ◯ Self ◯ Spouse ◯ Child ◯ Other: _____	
Policy Holder's Name	Policy Holder's Date of Birth
Referral/Prior Authorization # (please attach)	☐ Hold test for cost estimate and contact patient if estimate is >$250 (for in-network/contracted commercial insurance only)
Secondary Insurance Type:	

Insurance Carrier	Insurance ID #	Subscriber Name	Date of Birth

Relationship to Insured
◯ Self ◯ Spouse ◯ Child ◯ Other: _____

◯ **PATIENT DOES NOT HAVE INSURANCE COVERAGE**
By selecting this option, I attest that my patient does not have insurance and they are a US resident.

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Autism Partnership Program - SHANK3 Genetic Testing Program
Test Requisition Form

GeneDx

First Name	Last Name	Date of Birth

FAMILY MEMBER SAMPLES TO BE INCLUDED IN TESTING

FAMILY MEMBER INFORMATION MUST BE PROVIDED BELOW AND SAMPLES MUST BE RECEIVED WITHIN 3 WEEKS FOR INCLUSION IN THE PROBAND'S TEST. Ordered test codes may require adjusting to appropriately correspond with family member samples received. A change in the ordered test will impact billing, including prior benefits investigations. Family members will not receive a separate report.

Biological Mother First Name Last Name DOB	○ Asymptomatic ○ Symptomatic ○ At GeneDx (Accession #: _____) ○ Not available ○ To be sent within 3 weeks
Biological Father First Name Last Name DOB	○ Asymptomatic ○ Symptomatic ○ At GeneDx (Accession #: _____) ○ Not available ○ To be sent within 3 weeks
Other Biological Relative First Name Last Name DOB	Relationship to Proband ○ Asymptomatic ○ Symptomatic ○ At GeneDx (Accession #: _____) ○ Not available ○ To be sent within 3 weeks

ICD-10-CM CODES

ICD-10-CM Codes to support all test(s) ordered

Clinical Diagnosis	Age of Onset

EXOME SEQUENCING TESTING OPTIONS

TEST CODE	TEST NAME
☐ 561a	ExomeDx, trio*
☐ 561e	ExomeDx, duo*
☐ 561b	ExomeDx, proband
☐ 561a & 561m	ExomeDx + mito, trio*, consists of two separate tests†: • 561a ExomeDx, trio*; and • 561m Mitochondrial Genome Sequencing & Deletion Testing
☐ 561e & 561m	ExomeDx + mito, duo*, consists of two separate tests†: • 561e ExomeDx, duo*; and • 561m Mitochondrial Genome Sequencing & Deletion Testing
☐ 561b & 561m	ExomeDx + mito, proband, consists of two separate tests†: • 561b ExomeDx, proband; and • 561m Mitochondrial Genome Sequencing & Deletion Testing

GeneDx Program Code: ESAS3

*** If a Trio or Duo test is ordered, please fill out the *Family Member Samples to be Included in Testing* section below**

† ExomeDx + mito components (exome and mito genome) will be billed and reported separately. Mitochondrial Genome Sequencing & Deletion Testing (561m) is *NOT* eligible for the partnership program billing and will be billed separately to the patient's insurance or self pay if the patient is uninsured.

CLINICAL INFORMATION (DETAILED MEDICAL RECORDS MUST BE ATTACHED)

Relevant clinical records are required at the time of sample submission to ensure the information is included in data analysis.

Genes of interest (limit to 10):	Differential diagnosis:	Relevant Clinical Findings (Important for analysis and interpretation of molecular variants):

PREVIOUS GENETIC TESTING

Personal or family history of genetic testing ○ No ○ Yes (If yes, please complete all fields below)

Relation to patient (self, sibling, etc.), Genetic Test(s) and Result (e.g. positive, negative, etc.). If relative was tested at GeneDx, please also provide their accession #:

_____

_____

If patient or relative(s) were found to have a positive or VUS result on prior testing, please provide details below. | Indicate any Variants of Interest‡ via the checkbox below.

Relation (self, sibling, etc.)	Gene	Transcript #	c./p. (SNV) or exon # (CNV)	Build, coordinates (CNV)	Variant of Interest‡?
1					☐
2					☐
3					☐

Required for sequence variants: gene, c./p., transcript #
Required for CNVs: gene, transcript #, exon # OR build, coordinates

‡ For certain tests, GeneDx **may** be able to specifically comment upon the presence or absence of previously identified variant(s) of interest in the report. Complete variant information must be provided in the table above at the time the test order is placed. If you do not complete the table above and check off that a previously identified variant is a variant of interest, it will not be possible to comment upon the presence or absence of the variant in the report retrospectively. This service is not applicable to targeted variant testing.

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INFORMED CONSENT

First Name	Last Name	Date of Birth

For the purposes of this consent, "I", "my", and "your" will refer to me or to my child, including my unborn child, if my child is the person for whom the healthcare provider has ordered testing.

PURPOSE OF THIS TEST

The purpose of this test is (a) to see if I may have a genetic variant or chromosome rearrangement causing a genetic disorder; or (b) to evaluate the chance that I will develop or pass on a genetic disorder in the future. If I already know the specific gene variant(s) or chromosome rearrangement that causes the genetic disorder in my family, I agree to inform the laboratory of this information.

WHAT TYPE OF TEST RESULTS CAN I EXPECT FROM GENETIC TESTING?

1. Positive: A change in your DNA was found, which is very likely the cause of your features/symptoms. This is the most straightforward test result, which can be used as the basis to test other family members to determine their chances of having either the disease or a child with the disease.
2. Negative: No variants were found to explain your symptoms. This does not mean that you do not have a genetic condition. It is still possible that there is a genetic variant not found by the test that was ordered. Your healthcare provider or genetic counselor may discuss more testing either now or in the future.
3. Variant of Uncertain Significance (VUS): A change in a gene was found. However, we are not sure whether this variant is the cause of your symptoms/features. More information is needed. We may suggest testing other family members to help figure out the meaning of the test result.
4. Unexpected Results (ACMG Secondary Findings): In rare instances, this test may reveal an important genetic change that is not directly related to the reason for ordering this test. For example, this test may find you are at risk for another genetic condition I am not aware of or it may indicate differences in the number or rearrangement of sex chromosomes. We may disclose this information to the ordering healthcare provider if it likely affects medical care.

Because medical and scientific knowledge is constantly changing, new information that becomes available may supplement the information GeneDx used to interpret my results. Healthcare providers can contact GeneDx at any time to discuss the classification of an identified variant.

WHAT IS TRIO/DUO-BASED GENETIC TESTING?

For some genetic tests, including samples from the biological parents and/or other biological relatives along with the patient's sample can help with the interpretation of the test results. These tests are often referred to as "trio tests" since they typically include samples from the patient and both parents.

Samples from relatives should be submitted with the patient's sample. Clinical information must be provided for the patient and any relative who submits a sample.

I understand that GeneDx will use the relative sample(s) when needed for the interpretation of my test results and that my test report may include clinical and genetic information about a relative when it is relevant to the interpretation of the test results. I further understand that relatives will not receive an independent analysis of data nor a separate report.

RISKS AND LIMITATIONS OF GENETIC TESTING

1. In some cases, testing may not identify a genetic variant even though one exists. This may be due to limitations in current medical knowledge or testing technology.
2. Accurate interpretation of test results may require knowing the true biological relationships in a family. I understand that if I fail to accurately state the biological relationships in my family, it could lead to incorrect interpretation of the test results, incorrect diagnoses, and/or inconclusive test results. If genetic testing reveals that the true biological relationships in a family are not as I reported them, including non-paternity (the reported father is not the biological father) and consanguinity (the parents are related by blood), I agree to have these findings reported to the healthcare provider who ordered the test.
3. Although genetic testing is highly accurate, inaccurate results may occur. These reasons include, but are not limited to mislabeled samples, inaccurate reporting of clinical/medical information, rare technical errors, or other reasons.
4. I understand that this test may not detect all of the long-term medical risks that I might experience. The result of this test does not guarantee my health and that additional diagnostic tests may still need to be done.
5. I agree to provide an additional sample if the initial sample is not adequate.

PATIENT CONFIDENTIALITY AND GENETIC COUNSELING

It is recommended that I receive genetic counseling before and after having this genetic test. I can find a genetic counselor in my area at www.nsgc.org. Further testing or additional consultations with a healthcare provider may be necessary.

To maintain confidentiality, test results will only be released to the referring healthcare provider, the ordering laboratory, to me, to other healthcare providers involved in my care, diagnosis and treatment, or to others with my consent or as permitted or required by law. Federal laws prohibit unauthorized disclosure of this information. More information can be found at: www.genome.gov/10002077

SAMPLE RETENTION

After testing is complete, my sample may be de-identified and be used for test development and improvement, internal validation, quality assurance, and training purposes. GeneDx will not return DNA samples to you or to referring healthcare providers, unless specific prior arrangements have been made.

I understand that samples from residents of New York State will not be included in the de-identified research studies described in this authorization and GeneDx will not retain them for more than 60 days after test completion, unless specifically authorized by my selection. The authorization is optional, and testing will be unaffected if I do not check the box for the New York authorization language. GeneDx will not perform any tests on the biological sample other than those specifically authorized.

DATABASE PARTICIPATION

De-identified health history and genetic information can help healthcare providers and scientists understand how genes affect human health. Sharing this de-identified information helps healthcare providers to provide better care for their patients and researchers to make new discoveries. GeneDx shares this type of information with healthcare providers, scientists, and healthcare databases. GeneDx will not share any personally identifying information and will replace the identifying information with a unique code not derived from any personally identifying information. Even with a unique code, there is a risk that I could be identified based on the genetic and health information that is shared. GeneDx believes that this is unlikely, though the risk is greater if I have already shared my genetic or health information with public resources, such as genealogy websites.

EPILEPSY PARTNERSHIP PROGRAM PARTICIPATION

I understand that GeneDx will send de-identified test results data, excluding ACMG secondary findings, to third parties for research or commercial purposes and that GeneDx is compensated for the provision of testing services and for data sharing with third parties that is compliant with applicable law. At no time will GeneDx share any patient personally identifiable information. GeneDx may share contact information for providers listed on the Test Requisition Form with third parties.

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PATIENT RECONTACT FOR RESEARCH PARTICIPATION

GeneDx may collaborate with other scientists, researchers and drug developers to advance knowledge of genetic diseases and to develop new treatments. If there are opportunities to participate in research relevant to the disorder in (my/my child's) family, GeneDx may contact my healthcare provider for research purposes, such as the development of new testing, drug development, or other treatment modalities. In some situations, such as if my healthcare provider is not available, I may be contacted directly. I can opt out of being contacted directly regarding any of the above activities by having my healthcare provider check the box for Patient Research Opt-Out. Any research that results in medical advances, including new products, tests or discoveries, may have potential commercial value and may be developed and owned by GeneDx or the collaborating researchers. If any individuals or corporations benefit financially from these studies, no compensation will be provided to (me/my child) or to (my/my child's) heirs.

EXOME/GENOME SEQUENCING SECONDARY FINDINGS

- Applicable only for full exome sequencing and genome sequencing tests
- Does not pertain to *Xpanded*® or Slice tests

As many different genes and conditions are analyzed in an exome or genome sequencing test, these tests may reveal some findings not directly related to the reason for ordering the test. Such findings are called "incidental" or "secondary" and can provide information that was not anticipated.

Secondary findings are variants, identified by an exome or genome sequencing test, in genes that are unrelated to the individual's reported clinical features.

The American College of Medical Genetics and Genomics (ACMG) has recommended that secondary findings identified in a specific subset of medically actionable genes associated with various inherited disorders be reported for all probands undergoing exome or genome sequencing. Please refer to the latest version of the ACMG recommendations for reporting of secondary findings in clinical exome and genome sequencing for complete details of the genes and associated genetic disorders. Reportable secondary findings will be confirmed by an alternate test method when needed.

WHAT WILL BE REPORTED FOR THE PATIENT?

All pathogenic and likely pathogenic variants associated with specific genotypes identified in the genes (for which a minimum of 10X coverage was achieved by exome sequencing or a minimum of 15X coverage was achieved by genome sequencing), as recommended by the ACMG.

WHAT WILL BE REPORTED FOR RELATIVES?

The presence or absence of any secondary finding(s) reported for the proband will be provided for all relatives analyzed by an exome or genome sequencing test.

LIMITATIONS

Pathogenic and/or likely pathogenic variants may be present in a portion of the gene not covered by this test and therefore are not reported. The absence of reportable secondary findings for any particular gene does not mean there are no pathogenic and/or likely pathogenic variants in that gene. Pathogenic variants and/or likely pathogenic variants that may be present in a relative, but are not present in the proband, will not be identified nor reported. Only changes at the sequence level will be reported in the secondary findings report. Larger deletions/duplications, abnormal methylation, triplet repeat or other expansion variants, or other variants not routinely identified by clinical exome and genome sequencing will not be reported.

FINANCIAL AGREEMENT AND GUARANTEE

For insurance billing, I understand and authorize GeneDx to bill my health insurance plan on my behalf, to release any information required for billing, and to be my designated representative for purposes of appealing any denial of benefits. I irrevocably assign to and direct that payment be made directly to GeneDx.

I understand that my out-of-pocket costs may be different than the estimated amount indicated to me by GeneDx as part of a benefit investigation. I agree to be financially responsible for any and all amounts as indicated on the explanation of benefits issued by my health insurance plan. If my insurance provider sends a payment directly to me for services performed by GeneDx on my behalf, I agree to endorse the insurance check and forward it to GeneDx within 30 days of receipt as payment towards GeneDx's claim for services rendered.

By signing this form: (i) I acknowledge that I have read or have had read to me the GeneDx Informed Consent document, and understand the information regarding genetic testing; (ii) I have had the opportunity to ask questions about the testing, the procedure, the risks, and the alternatives; (iii) I authorize GeneDx to perform genetic testing as ordered; (iv) I understand that, for tests that evaluate data from multiple family members concurrently, test results from these family members may be included in a single comprehensive report that will be made available to all tested individuals and their healthcare providers; (v) if at any time I or my provider provide an email address or mobile phone number at which I may be contacted, I consent to receiving email or text messages from GeneDx; and (vi) I understand that this consent applies to all future communications unless I request a change in writing.

- ☐ **Secondary Findings Opt-out.** Check this box if you do not wish to receive ACMG secondary findings (Full Exome Sequencing and Genome Sequencing Tests ONLY; not for *Xpanded*® or Slice tests).
- ☐ **New York Retention Opt-in.** By checking this box, I confirm that I am a New York State resident, and I give permission for GeneDx to retain any remaining sample longer than 60 days after the completion of testing, and to be used as a de-identified sample for test development and improvement, internal validation, quality assurance, and training purposes. Otherwise, New York law requires GeneDx to destroy my sample within 60 days, and it cannot be used for test development studies.
- ☐ **Patient Research Opt-out.** Check this box if you wish to opt out of being contacted for research studies.
- ☐ **Health Information Exchange Opt-in.** Check this box if you reside in CA, FL, MA, NV, NY, RI, and VT and wish to opt-in to my health information to be shared for Health Information Exchange participation.
- ☐ **Health Information Exchange Opt-out.** Check this box if you reside in any other US state or territory and wish to opt-out of participation in Health Information Exchange.

Signature of Patient/Legal Guardian (required)		Date
Signature of Relative A/Legal Guardian	Relative A Relationship to Patient	Date
Signature of Relative B/Legal Guardian	Relative B Relationship to Patient	Date

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