

**Reporting Title:** Movement, Autoimm/Paraneo, CSF

**Performing Location:** Mayo Clinic Laboratories - Rochester Main Campus

**Ordering Guidance:**

Multiple neurological phenotype-specific autoimmune/paraneoplastic evaluations are available. For more information as well as phenotype-specific testing options, see [Autoimmune Neurology Test Ordering Guide](#).

When more than one evaluation is ordered on the same order number the duplicate will be canceled.

For a list of antibodies performed with each evaluation, see [Autoimmune Neurology Antibody Matrix](#).

**Necessary Information:**

Provide the following information:

- Relevant clinical information
- Ordering healthcare professional's name, phone number, mailing address, and e-mail address

**Specimen Requirements:**

**Patient Preparation:** For optimal antibody detection, specimen collection is recommended before initiation of immunosuppressant medication, or corticosteroid or intravenous immunoglobulin (IVIg) treatment.

**Container/Tube:** Sterile vial

**Preferred:** Collection vial number 1

**Acceptable:** Any collection vial

**Specimen Volume:** 4 mL

**Forms:**

[If not ordering electronically, complete, print, and send a Neurology Specialty Testing Client Test Request](#) (T732) with the specimen.

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	28 days	
	Ambient	72 hours	
	Frozen	28 days	

**Result Codes:**

Result ID	Reporting Name	Type	Unit	LOINC®
89079	AGNA-1, CSF	Alphanumeric		90827-7
5906	Amphiphysin Ab, CSF	Alphanumeric		90815-2
3852	ANNA-1, CSF	Alphanumeric		44768-0
7472	ANNA-2, CSF	Alphanumeric		56959-0
21633	ANNA-3, CSF	Alphanumeric		90836-8
3988	PCA-1, CSF	Alphanumeric		90841-8

21632	PCA-2, CSF	Alphanumeric		90843-4
21631	PCA-Tr, CSF	Alphanumeric		90845-9
21747	CRMP-5-IgG Western Blot, CSF	Alphanumeric		53707-6
21702	GAD65 Ab Assay, CSF	Numeric	nmol/L	94711-9
61513	NMDA-R Ab CBA, CSF	Alphanumeric		93502-3
61514	AMPA-R Ab CBA, CSF	Alphanumeric		93491-9
61515	GABA-B-R Ab CBA, CSF	Alphanumeric		93426-5
64280	LG11-IgG CBA, CSF	Alphanumeric		94288-8
64282	CASPR2-IgG CBA, CSF	Alphanumeric		94286-2
64927	mGluR1 Ab IFA, CSF	Alphanumeric		94361-3
64934	DPPX Ab CBA, CSF	Alphanumeric		94283-9
601997	Movement Disorder Interp, CSF	Alphanumeric		69048-7
618902	IFA Notes	Alphanumeric		48767-8
605156	GFAP IFA, CSF	Alphanumeric		94360-5
606953	ITPR1 IFA, CSF	Alphanumeric		96467-6
606959	GRAF1 IFA, CSF	Alphanumeric		96473-4
606965	NIF IFA, CSF	Alphanumeric		96490-8
606951	IgLON5 CBA, CSF	Alphanumeric		96481-7
615862	AP3B2 IFA, CSF	Alphanumeric		101907-4
615866	Neurochondrin IFA, CSF	Alphanumeric		101451-3
615874	Septin-7 IFA, CSF	Alphanumeric		101464-6
615870	Septin-5 IFA, CSF	Alphanumeric		101461-2
620067	PDE10A Ab IFA, CSF	Alphanumeric		103842-1
616446	TRIM46 Ab IFA, CSF	Alphanumeric		103843-9
622118	KLHL11-IgG CBA, CSF	Alphanumeric		99073-9

LOINC® and CPT codes are provided by the performing laboratory.

### Supplemental Report:

No

### Components:

Test Id	Reporting Name	CPT Units	CPT Code	Always Performed	Available Separately
MDCI	Movement Disorder Interp, CSF			Yes	No
AMPCC	AMPA-R Ab CBA, CSF	1	86255	Yes	No
AMPHC	Amphiphysin Ab, CSF	1	86255	Yes	No
AGN1C	Anti-Glial Nuclear Ab, Type 1	1	86255	Yes	No
ANN1C	Anti-Neuronal Nuclear Ab, Type 1	1	86255	Yes	No
ANN2C	Anti-Neuronal Nuclear Ab, Type 2	1	86255	Yes	No

ANN3C	Anti-Neuronal Nuclear Ab, Type 3	1	86255	Yes	No
APBIC	AP3B2 IFA, CSF	1	86255	Yes	No
CS2CC	CASPR2-IgG CBA, CSF	1	86255	Yes	No
CRMWC	CRMP-5-IgG Western Blot, CSF	1	84182	Yes	Yes
DPPCC	DPPX Ab CBA, CSF	1	86255	Yes	No
GABCC	GABA-B-R Ab CBA, CSF	1	86255	Yes	No
GD65C	GAD65 Ab Assay, CSF	1	86341	Yes	Yes
GFAIC	GFAP IFA, CSF	1	86255	Yes	No
GRFIC	GRAF1 IFA, CSF	1	86255	Yes	No
IG5CC	IgLON5 CBA, CSF	1	86255	Yes	No
ITPIC	ITPR1 IFA, CSF	1	86255	Yes	No
KLHCC	KLHL11-IgG CBA, CSF	1	0432U	Yes	Yes
LG1CC	LGI1-IgG CBA, CSF	1	86255	Yes	No
GL1IC	mGluR1 Ab IFA, CSF	1	86255	Yes	No
NCDIC	Neurochondrin IFA, CSF	1	86255	Yes	No
NIFIC	NIF IFA, CSF	1	86255	Yes	No
NMDCC	NMDA-R Ab CBA, CSF	1	86255	Yes	No
PCTRC	Purkinje Cell Cytoplasmic Ab Type Tr	1	86255	Yes	No
PCA1C	Purkinje Cell Cytoplasmic Ab Type 1	1	86255	Yes	No
PCA2C	Purkinje Cell Cytoplasmic Ab Type 2	1	86255	Yes	No
PDEIC	PDE10A Ab IFA, CSF	1	86255	Yes	No
SP5IC	Septin-5 IFA, CSF	1	86255	Yes	No
SP7IC	Septin-7 IFA, CSF	1	86255	Yes	No
T46IC	TRIM46 Ab IFA, CSF	1	86255	Yes	No

**CPT Code Information:**

86255 x26

84182

86341

0432U

84182-AGNBC (if appropriate)

86256-GNTC (if appropriate)

86255-AINCC (if appropriate)

84182-AMIBC (if appropriate)

86256-AMPIC (if appropriate)

84182-AN1BC (if appropriate)

86256-AN1TC (if appropriate)

84182-AN2BC (if appropriate)

86256-AN2TC (if appropriate)

86256-AN3TC (if appropriate)

86255-APBCC (if appropriate)

86256-APBTC (if appropriate)  
 86256-APHTC (if appropriate)  
 86256-CRMTC (if appropriate)  
 86256-DPPTC (if appropriate)  
 86256-GABIC (if appropriate)  
 86255-GFACC (if appropriate)  
 86256-GFATC (if appropriate)  
 86255-GL1CC (if appropriate)  
 86256-GL1TC (if appropriate)  
 86255-GRFCC (if appropriate)  
 86256-GRFTC (if appropriate)  
 86256-IG5TC (if appropriate)  
 86255-ITPCC (if appropriate)  
 86256-ITPTC (if appropriate)  
 86256-K11TC (if appropriate)  
 86255-NCDCC (if appropriate)  
 86256-NCDTC (if appropriate)  
 86255-NFHCC (if appropriate)  
 86255-NFLCC (if appropriate)  
 86256-NIFTC (if appropriate)  
 86256-NMDIC (if appropriate)  
 84182-PC1BC (if appropriate)  
 86256-PC1TC (if appropriate)  
 86256-PC2TC (if appropriate)  
 84182-PCTBC (if appropriate)  
 86256-PCTTC (if appropriate)  
 86256-PDETC (if appropriate)  
 86255-SP5CC (if appropriate)  
 86256-SP5TC (if appropriate)  
 86255-SP7CC (if appropriate)  
 86256-SP7TC (if appropriate)  
 86255-T46CC (if appropriate)  
 86256-T46TC (if appropriate)

**Reflex Tests:**

Test Id	Reporting Name	CPT Units	CPT Code	Always Performed	Available Separately
AGNBC	AGNA-1 Immunoblot, CSF	1	84182	No	No
AINCC	Alpha Internexin CBA, CSF	1	86255	No	No
AMPIC	AMPA-R Ab IF Titer Assay, CSF	1	86256	No	No
AMIBC	Amphiphysin Immunoblot, CSF	1	84182	No	No
AN1BC	ANNA-1 Immunoblot, CSF	1	84182	No	No
AN2BC	ANNA-2 Immunoblot, CSF	1	84182	No	No

DPPTC	DPPX Ab IFA Titer, CSF	1	86256	No	No
GABIC	GABA-B-R Ab IF Titer Assay, CSF	1	86256	No	No
GRFCC	GRAF1 CBA, CSF	1	86255	No	No
GRFTC	GRAF1 IFA Titer, CSF	1	86256	No	No
IG5TC	IgLON5 IFA Titer, CSF	1	86256	No	No
ITPCC	ITPR1 CBA, CSF	1	86255	No	No
ITPTC	ITPR1 IFA Titer, CSF	1	86256	No	No
GL1TC	mGluR1 Ab IFA Titer, CSF	1	86256	No	No
GL1CC	mGluR1 Ab CBA, CSF	1	86255	No	No
NFHCC	NIF Heavy Chain CBA, CSF	1	86255	No	No
NIFTC	NIF IFA Titer, CSF	1	86256	No	No
NFLCC	NIF Light Chain CBA, CSF	1	86255	No	No
NMDIC	NMDA-R Ab IF Titer Assay, CSF	1	86256	No	No
PC1BC	PCA-1 Immunoblot, CSF	1	84182	No	No
PCTBC	PCA-Tr Immunoblot, CSF	1	84182	No	No
AN1TC	ANNA-1 Titer, CSF	1	86256	No	No
AN2TC	ANNA-2 Titer, CSF	1	86256	No	No
AN3TC	ANNA-3 Titer, CSF	1	86256	No	No
APBCC	AP3B2 CBA, CSF	1	86255	No	No
APBTC	AP3B2 IFA Titer, CSF	1	86256	No	No
APHTC	Amphiphysin Ab Titer, CSF	1	86256	No	No
CRMTC	CRMP-5-IgG Titer, CSF	1	86256	No	No
GFACC	GFAP CBA, CSF	1	86255	No	No
GFATC	GFAP IFA Titer, CSF	1	86256	No	No
NCDCC	Neurochondrin CBA, CSF	1	86255	No	No
NCDTC	Neurochondrin IFA Titer, CSF	1	86256	No	No
PC1TC	PCA-1 Titer, CSF	1	86256	No	No
PC2TC	PCA-2 Titer, CSF	1	86256	No	No
PCTTC	PCA-Tr Titer, CSF	1	86256	No	No
PDETC	PDE10A Ab IFA Titer, CSF	1	86256	No	No
SP5CC	Septin-5 CBA, CSF	1	86255	No	No
SP5TC	Septin-5 IFA Titer, CSF	1	86256	No	No
SP7CC	Septin-7 CBA, CSF	1	86255	No	No
SP7TC	Septin-7 IFA Titer, CSF	1	86256	No	No
T46CC	TRIM46 Ab CBA, CSF	1	86255	No	No
T46TC	TRIM46 Ab IFA Titer, CSF	1	86256	No	No
AGNTC	AGNA-1 Titer, CSF	1	86256	No	No
K11TC	KLHL11 Ab IFA Titer, CSF	1	86256	No	No

### Result Codes for Reflex Tests:

Test ID	Result ID	Reporting Name	Type	Unit	LOINC®
NMDIC	61523	NMDA-R Ab IF Titer Assay, CSF	Alphanumeric	titer	In Process
GABIC	61525	GABA-B-R Ab IF Titer Assay, CSF	Alphanumeric	titer	93425-7
AMPIC	61524	AMPA-R Ab IF Titer Assay, CSF	Alphanumeric	titer	93492-7
DPPTC	64991	DPPX Ab IFA Titer, CSF	Alphanumeric	titer	94284-7
GL1CC	64931	mGluR1 Ab CBA, CSF	Alphanumeric		93500-7
GL1TC	64989	mGluR1 Ab IFA Titer, CSF	Alphanumeric	titer	93501-5
GFATC	605134	GFAP IFA Titer, CSF	Alphanumeric	titer	93421-6
GFACC	605154	GFAP CBA, CSF	Alphanumeric		93422-4
AGNBC	607271	AGNA-1 Immunoblot, CSF	Alphanumeric		94383-7
AN1BC	607261	ANNA-1 Immunoblot, CSF	Alphanumeric		94390-2
AN2BC	607263	ANNA-2 Immunoblot, CSF	Alphanumeric		94388-6
PC1BC	607265	PCA-1 Immunoblot, CSF	Alphanumeric		94272-2
PCTBC	607267	PCA-Tr Immunoblot, CSF	Alphanumeric		94386-0
AMIBC	607269	Amphiphysin Immunoblot, CSF	Alphanumeric		94384-5
NFLCC	606971	NIF Light Chain CBA, CSF	Alphanumeric		96489-0
ITPCC	606957	ITPR1 CBA, CSF	Alphanumeric		96468-4
NFHCC	606969	NIF Heavy Chain CBA, CSF	Alphanumeric		96488-2
AINCC	606967	Alpha Internexin CBA, CSF	Alphanumeric		96482-5
GRFTC	606961	GRAF1 IFA Titer, CSF	Alphanumeric	titer	96474-2
GRFCC	606963	GRAF1 CBA, CSF	Alphanumeric		96475-9
IG5TC	606949	IgLON5 IFA Titer, CSF	Alphanumeric	titer	96480-9
ITPTC	606955	ITPR1 IFA Titer, CSF	Alphanumeric	titer	96469-2
NIFTC	607772	NIF IFA Titer, CSF	Alphanumeric	titer	96491-6
K11TC	610582	KLHL11 Ab IFA Titer, CSF	Alphanumeric	titer	99071-3
AGNTC	43443	AGNA-1 Titer, CSF	Alphanumeric	titer	94355-5
AN1TC	43440	ANNA-1 Titer, CSF	Alphanumeric	titer	94356-3
CRMTC	43445	CRMP-5-IgG Titer, CSF	Alphanumeric	titer	94706-9
SP7TC	616116	Septin-7 IFA Titer, CSF	Alphanumeric	titer	101457-0
SP5TC	616114	Septin-5 IFA Titer, CSF	Alphanumeric	titer	101459-6
NCDTC	616112	Neurochondrin IFA Titer, CSF	Alphanumeric	titer	101453-9
APBTC	616110	AP3B2 IFA Titer, CSF	Alphanumeric	titer	101908-2
APHTC	618164	Amphiphysin Ab Titer, CSF	Alphanumeric	titer	94354-8
PC1TC	43446	PCA-1 Titer, CSF	Alphanumeric	titer	94363-9
AN2TC	43441	ANNA-2 Titer, CSF	Alphanumeric	titer	94357-1
PCTTC	43448	PCA-Tr Titer, CSF	Alphanumeric	titer	94362-1
AN3TC	43442	ANNA-3 Titer, CSF	Alphanumeric	titer	94358-9
PC2TC	43447	PCA-2 Titer, CSF	Alphanumeric	titer	94364-7
APBCC	615860	AP3B2 CBA, CSF	Alphanumeric		101907-4
SP5CC	615868	Septin-5 CBA, CSF	Alphanumeric		101462-0
SP7CC	615872	Septin-7 CBA, CSF	Alphanumeric		101466-1

NCDCC	615864	Neurochondrin CBA, CSF	Alphanumeric		101449-7
T46CC	616450	TRIM46 Ab CBA, CSF	Alphanumeric		105524-3
T46TC	616448	TRIM46 Ab IFA Titer, CSF	Alphanumeric	titer	105526-8
PDETC	620069	PDE10A Ab IFA Titer, CSF	Alphanumeric	titer	105522-7

### Reference Values:

Test ID	Reporting name	Methodology*	Reference value
MDCI	Movement Disorder Interp, CSF	Technical interpretation	Interpretive report
AMPCC	AMPA-R Ab CBA, CSF	CBA	Negative
AMPHC	Amphiphysin Ab, CSF	IFA	Negative
AGN1C	Anti-Glial Nuclear Ab, Type 1	IFA	Negative
ANN1C	Anti-Neuronal Nuclear Ab, Type 1	IFA	Negative
ANN2C	Anti-Neuronal Nuclear Ab, Type 2	IFA	Negative
ANN3C	Anti-Neuronal Nuclear Ab, Type 3	IFA	Negative
APBIC	AP3B2 IFA, CSF	IFA	Negative
CS2CC	CASPR2-IgG CBA, CSF	CBA	Negative
CRMWC	CRMP-5-IgG Western Blot, CSF	WB	Negative
DPPCC	DPPX Ab CBA, CSF	CBA	Negative
GABCC	GABA-B-R Ab CBA, CSF	CBA	Negative
GD65C	GAD65 Ab Assay, CSF	RIA	< or =0.02 nmol/L Reference values apply to all ages.
GRFIC	GRAF1 IFA, CSF	IFA	Negative
GFAIC	GFAP IFA, CSF	IFA	Negative
IG5CC	IgLON5 CBA, CSF	CBA	Negative
ITPIC	ITPR1 IFA, CSF	IFA	Negative
KLHCC	KLHL11-IgG CBA, CSF	CBA	Negative
LG1CC	LG1-IgG CBA, CSF	CBA	Negative
GL1IC	mGluR1 Ab IFA, CSF	IFA	Negative
NCDIC	Neurochondrin IFA, CSF	IFA	Negative
NIFIC	NIF IFA, CSF	IFA	Negative
NMDCC	NMDA-R Ab CBA, CSF	CBA	Negative
PCTRC	Purkinje Cell Cytoplasmic Ab Type Tr	IFA	Negative
PCA1C	Purkinje Cell Cytoplasmic Ab Type 1	IFA	Negative
PCA2C	Purkinje Cell Cytoplasmic Ab Type 2	IFA	Negative
PDEIC	PDE10A Ab IFA, CSF	IFA	Negative
SP5IC	Septin-5 IFA, CSF	IFA	Negative
SP7IC	Septin-7 IFA, CSF	IFA	Negative
T46IC	TRIM46 IFA, CSF	IFA	Negative

**Reflex Information:**

Test ID	Reporting name	Methodology*	Reference value
AGNBC	AGNA-1 Immunoblot, CSF	IB	Negative
AGNTC	AGNA-1 Titer, CSF	IFA	<1:2
AINCC	Alpha Internexin CBA, CSF	CBA	Negative
AMPIC	AMPA-R Ab IF Titer Assay, CSF	IFA	<1:2
AMIBC	Amphiphysin Immunoblot, CSF	IB	Negative
AN1BC	ANNA-1 Immunoblot, CSF	IB	Negative
AN1TC	ANNA-1 Titer, CSF	IFA	<1:2
AN2BC	ANNA-2 Immunoblot, CSF	IB	Negative
AN2TC	ANNA-2 Titer, CSF	IFA	<1:2
AN3TC	ANNA-3 Titer, CSF	IFA	<1:2
APBCC	AP3B2 CBA, CSF	CBA	Negative
APBTC	AP3B2 IFA Titer, CSF	IFA	<1:2
APHTC	Amphiphysin Ab Titer, CSF	IFA	<1:2
CRMTC	CRMP-5-IgG Titer, CSF	IFA	<1:2
DPPTC	DPPX Ab IFA Titer, CSF	IFA	<1:2
GABIC	GABA-B-R Ab IF Titer Assay, CSF	IFA	<1:2
GFACC	GFAP CBA, CSF	CBA	Negative
GFATC	GFAP IFA Titer, CSF	IFA	<1:2
GRFCC	GRAF1 CBA, CSF	CBA	Negative
GRFTC	GRAF1 IFA Titer, CSF	IFA	<1:2
IG5TC	IgLON5 IFA Titer, CSF	IFA	<1:2
ITPCC	ITPR1 CBA, CSF	CBA	Negative
ITPTC	ITPR1 IFA Titer, CSF	IFA	<1:2
K11TC	KLHL11 Ab IFA Titer, CSF	IFA	<1:2
GL1TC	mGluR1 Ab IFA Titer, CSF	IFA	<1:2
GL1CC	mGluR1 Ab CBA, CSF	CBA	Negative
NCDCC	Neurochondrin CBA, CSF	CBA	Negative
NCDTC	Neurochondrin IFA Titer, CSF	IFA	<1:2
NFHCC	NIF Heavy Chain CBA, CSF	CBA	Negative
NIFTC	NIF IFA Titer, CSF	IFA	<1:2
NFLCC	NIF Light Chain CBA, CSF	CBA	Negative
NMDIC	NMDA-R Ab IF Titer Assay, CSF	IFA	<1:2
PC1BC	PCA-1 Immunoblot, CSF	IB	Negative
PC1TC	PCA-1 Titer, CSF	IFA	<1:2
PC2TC	PCA-2 Titer, CSF	IFA	<1:2
PCTTC	PCA-Tr Titer, CSF	IFA	<1:2
PCTBC	PCA-Tr Immunoblot, CSF	IB	Negative
PDETC	PDE10A Ab IFA Titer, CSF	IFA	<1:2
SP5CC	Septin-5 CBA, CSF	CBA	Negative

SP5TC	Septin-5 IFA Titer, CSF	IFA	<1:2
SP7CC	Septin-7 CBA, CSF	CBA	Negative
SP7TC	Septin-7 IFA Titer, CSF	IFA	<1:2
T46CC	TRIM46 CBA, CSF	CBA	Negative
T46TC	TRIM46 IFA Titer, CSF	IFA	<1:2

\*Methodology abbreviations:

Indirect Immunofluorescence assay (IFA)

Cell-binding assay (CBA)

Western blot (WB)

Radioimmunoassay (RIA)

Immunoblot (IB)

Neuron-restricted patterns of IgG staining that do not fulfill criteria for ANNA-1, ANNA-2, ANNA-3, CRMP-5-IgG, PCA-1, PCA-2, or PCA-Tr may be reported as "unclassified anti-neuronal IgG." Complex patterns that include nonneuronal elements may be reported as "uninterpretable."