Overview

Useful For

Serological evaluation of patients who present with a subacute neurological disorder of undetermined etiology, especially those with known risk factors for cancer

Directing a focused search for cancer

Investigating neurological symptoms that appear in the course of, or after, cancer therapy, and are not explainable by metastasis

Differentiating autoimmune neuropathies from neurotoxic effects of chemotherapy

Monitoring the immune response of seropositive patients in the course of cancer therapy

Detecting early evidence of cancer recurrence in previously seropositive patients

Profile Information

Test ID	Reporting Name	Available Separately	Always Performed
PAINT	Interpretive Comments	No	Yes
GANG	AChR Ganglionic Neuronal Ab, S	No	Yes
AMPHS	Amphiphysin Ab, S	No	Yes
AGN1S	Anti-Glial Nuclear Ab, Type 1	No	Yes
ANN1S	Anti-Neuronal Nuclear Ab, Type 1	No	Yes
ANN2S	Anti-Neuronal Nuclear Ab, Type 2	No	Yes
ANN3S	Anti-Neuronal Nuclear Ab, Type 3	No	Yes
CRMS	CRMP-5-IgG, S	No	Yes
VGKC	Neuronal (V-G) K+ Channel Ab, S	No	Yes
CCN	N-Type Calcium Channel Ab	No	Yes
CCPQ	P/Q-Type Calcium Channel Ab	No	Yes
PCABP	Purkinje Cell Cytoplasmic Ab Type 1	No	Yes
PCAB2	Purkinje Cell Cytoplasmic Ab Type 2	No	Yes
PCATR	Purkinje Cell Cytoplasmic Ab Type Tr	No	Yes

Test ID	Reporting Name	Available Separately	Always Performed
STR	Striational (Striated Muscle) Ab, S	Yes	Yes

Reflex Tests

Test ID	Reporting Name	Available Separately	Always Performed
ARBI	ACh Receptor (Muscle) Binding Ab	Yes	No
ARMO	ACh Receptor (Muscle) Modulating Ab	No	No
AGNBS	AGNA-1 Immunoblot, S	No	No
AMPCS	AMPA-R Ab CBA, S	No	No
AMPIS	AMPA-R Ab IF Titer Assay, S	No	No
AMIBS	Amphiphysin Immunoblot, S	No	No
AN1BS	ANNA-1 Immunoblot, S	No	No
AN2BS	ANNA-2 Immunoblot, S	No	No
CS2CS	CASPR2-IgG CBA, S	No	No
CRMWS	CRMP-5-IgG Western Blot, S	Yes	No
DPPCS	DPPX Ab CBA, S	No	No
DPPIS	DPPX Ab IFA, S	No	No
DPPTS	DPPX Ab IFA Titer, S	No	No
GABCS	GABA-B-R Ab CBA, S	No	No
GABIS	GABA-B-R Ab IF Titer Assay, S	No	No
GD65S	GAD65 Ab Assay, S	Yes	No
LG1CS	LGI1-IgG CBA, S	No	No
GL1CS	mGluR1 Ab CBA, S	No	No
GL1IS	mGluR1 Ab IFA, S	No	No
GL1TS	mGluR1 Ab IFA Titer, S	No	No
NMDCS	NMDA-R Ab CBA, S	No	No
NMDIS	NMDA-R Ab IF Titer Assay, S	No	No
PC1BS	PCA-1 Immunoblot, S	No	No
PCTBS	PCA-Tr Immunoblot, S	No	No

Testing Algorithm

If immunofluorescence assay (IFA) patterns suggest AGNA-1 antibody, then AGNA-1 immunoblot is performed at an additional charge.

If IFA patterns suggest amphiphysin antibody, then amphiphysin immunoblot is performed at an additional charge.

If IFA patterns suggest ANNA-1 antibody, then ANNA-1 immunoblot is performed at an additional charge.

If IFA patterns suggest ANNA-2 antibody, then ANNA-2 immunoblot is performed at an additional charge.

If IFA patterns suggest PCA-1 antibody, then PCA-1 immunoblot is performed at an additional charge.

If IFA patterns suggest PCA-Tr antibody, then PCA-Tr immunoblot is performed at an additional charge.

If IFA patterns suggest GAD65 antibody, then GAD65 antibody radioimmunoassay (RIA) is performed at an additional charge.

If IFA pattern suggest NMDA-receptor, then NMDA- receptor antibody cell-binding assay (CBA), and/or NMDA-receptor antibody titer is performed at an additional charge.

If IFA pattern suggest AMPA- receptor, then AMPA- receptor antibody CBA and/or AMPA- receptor antibody titer is performed at an additional charge.

If IFA pattern suggest GABA-B- receptor, then GABA-B- receptor antibody CBA and/or GABA-B- receptor antibody titer is performed at an additional charge.

If IFA pattern suggest DPPX, then DPPX antibody CBA and DPPX antibody titer is performed at an additional charge.

If IFA pattern suggest mGluR1, then mGluR1 antibody CBA and mGluR1 antibody titer is performed at an additional charge.

If VGKC is >0.00 nmol/L, then LGI1-IgG CBA and CASPR2-IgG CBA, S are performed at an additional charge.

If CRMP IFA is positive, then ACh receptor binding antibody, CRMP-5-IgG Western blot, and ACh receptor (muscle) modulating antibody will be performed at an additional charge.

If striational striated muscle antibody is 1:7,680 or greater, then ACh receptor binding antibody, CRMP-5-IgG Western blot, and ACh receptor (muscle) modulating antibody will be performed at an additional charge.

CRMP-5-IgG Western blot is also performed by specific request for more sensitive detection of CRMP-5-IgG. Testing should be requested in cases of subacute basal ganglionic disorders (chorea, Parkinsonism), cranial neuropathies (especially loss of vision, taste, or smell) and myelopathies.

The following algorithms are available in Special Instructions:

-Paraneoplastic Evaluation Algorithm

-Hereditary Peripheral Neuropathy Diagnostic Algorithm

Special Instructions

- Paraneoplastic Evaluation Algorithm
- Hereditary Peripheral Neuropathy Diagnostic Algorithm

Method Name

AGN1S, AMPHS, AMPIS, ANN1S, ANN2S, ANN3S, CRMS, DPPIS, DPPTS, GABIS, GL1IS, GL1TS, NMDIS, PCAB2, PCABP, PCATR: Indirect Immunofluorescence Assay (IFA)

STR: Enzyme-Linked Immunosorbent Assay (ELISA)

ARBI, CCN, CCPQ, GANG, GD65S, VGKC: Radioimmunoassay (RIA)

CRMWS: Western Blot (WB)

AGNBS, AMIBS, AN1BS, AN2BS, PC1BS, PCTBS: Immunoblot (IB)

AMPCS, CS2CS, DPPCS, GABCS, GL1CS, LG1CS, NMDCS: Cell-Binding Assay (CBA)

ARMO: Live Cell Assay (LCA)

NY State Available

Yes

Specimen

Specimen Type

Serum

Necessary Information

Provide the following information:

-Relevant clinical information

-Ordering Provider name, phone number, mailing address, and e-mail address

Specimen Required

Patient Preparation:

1. For optimal antibody detection, specimen collection is recommended prior to initiation of immunosuppressant medication.

2. This test should not be requested in patients who have recently received radioisotopes, therapeutically or diagnostically, because of potential assay interference. The specific waiting period before specimen collection will depend on the isotope administered, the dose given, and the clearance rate in the individual patient. Specimens will be screened for radioactivity prior to analysis. Radioactive specimens received in the laboratory will be held 1 week and assayed if sufficiently decayed, or canceled if radioactivity remains.

3. Patient should have no general anesthetic or muscle-relaxant drugs in the previous 24 hours.

Container/Tube:

Preferred: Red top

Acceptable: Serum gel

Specimen Volume: 4 mL

Forms

If not ordering electronically, complete, print, and send 1 of the following forms with the specimen:

-General Request (T239)

-Neurology Specialty Testing Client Test Request (T732)

Specimen Minimum Volume

2 mL

Reject Due To

Gross hemolysis	Reject
Gross lipemia	Reject
Gross icterus	Reject

Specimen Stability Information

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

Clinical and Interpretive

Clinical Information

Paraneoplastic autoimmune neurological disorders reflect a patient's humoral and cellular immune responses to cancer. The cancer may be new or recurrent, is usually limited in metastatic volume, and is often occult by standard imaging procedures. Autoantibodies specific for onconeural proteins found in the plasma membrane, cytoplasm, and nucleus of neurons, glia, or muscle are generated in this immune response and serve as serological markers of paraneoplastic autoimmunity. Cancers recognized in this context most commonly are small-cell lung carcinoma, thymoma, ovarian (or related mullerian) carcinoma, breast carcinoma, and Hodgkin lymphoma. Pertinent childhood neoplasms recognized thus far include neuroblastoma, thymoma, Hodgkin lymphoma, and chondroblastoma. An individual patient's autoantibody profile can predict a specific neoplasm with 90% certainty, but not the neurological syndrome.

Four classes of autoantibodies are recognized in this evaluation:

-Neuronal nuclear (ANNA-1, ANNA-2, ANNA-3)

-Anti-glial/neuronal nuclear (AGNA-1; also known as Sox1)

-Neuronal and muscle cytoplasmic (PCA-1, PCA-2, PCA-Tr, CRMP-5, amphiphysin, and striational)

-Plasma membrane cation channel, calcium channels, P/Q-type and N-type calcium channel, dendrotoxin-sensitive

potassium channels, and neuronal (ganglionic) and muscle nicotinic acetylcholine receptors (AChR). These autoantibodies are potential effectors of neurological dysfunction.

Seropositive patients usually present with subacute neurological symptoms and signs such as encephalopathy; cerebellar ataxia; myelopathy; radiculopathy; plexopathy; or sensory, sensorimotor, or autoimmune neuropathy, with or without a neuromuscular transmission disorder: Lambert-Eaton syndrome, myasthenia gravis, or neuromuscular hyperexcitability. Initial signs may be subtle, but a subacute multifocal and progressive syndrome usually evolves. Sensorimotor neuropathy and cerebellar ataxia are common presentations, but the clinical picture in some patients is dominated by striking gastrointestinal dysmotility, limbic encephalopathy, basal ganglionitis, or cranial neuropathy (especially loss of vision, hearing, smell, or taste).

Cancer risk factors include past or family history of cancer, history of smoking, or social or environmental exposure to carcinogens. Early diagnosis and treatment of the neoplasm favor less neurological morbidity and offer the best hope for survival.

Reference Values

Test ID	Reporting name	Methodology	Reference value
GANG	AChR Ganglionic Neuronal Ab, S	Radioimmunoassay (RIA)	< or =0.02 nmol/L
AMPHS	Amphiphysin Ab, S	Immunofluorescence (IFA)	<1:240
AGN1S	Anti-Glial Nuclear Ab, Type 1	IFA	<1:240
ANN1S	Anti-Neuronal Nuclear Ab, Type 1	IFA	<1:240
ANN2S	Anti-Neuronal Nuclear Ab, Type 2	IFA	<1:240
ANN3S	Anti-Neuronal Nuclear Ab, Type 3	IFA	<1:240
CRMS	CRMP-5-IgG, S	IFA	<1:240
VGKC	Neuronal (V-G) K+ Channel Ab, S	RIA	< or =0.02 nmol/L
CCN	N-Type Calcium Channel Ab	RIA	< or =0.03 nmol/L
CCPQ	P/Q-Type Calcium Channel Ab	RIA	< or =0.02 nmol/L
PCABP	Purkinje Cell Cytoplasmic Ab Type 1	IFA	<1:240
PCAB2	Purkinje Cell Cytoplasmic Ab Type 2	IFA	<1:240
PCATR	Purkinje Cell Cytoplasmic Ab Type Tr	IFA	<1:240
STR	Striational (Striated Muscle) Ab, S	Enzyme-linked immunosorbent assay (ELISA)	<1:120

Reflex Tests:

Test ID	Reporting name	Methodology	Reference value
ARBI	ACh Receptor (Muscle) Binding Ab	RIA	< or =0.02 nmol/L
ARMO	ACh Receptor (Muscle) Modulating Ab	Live cell assay (LCA)	0-20% (reported as __% loss of AChR)
AGNBS	AGNA-1 Immunoblot, S	Immunoblot (IB)	Negative
AMPCS	AMPA-R Ab CBA, S	Cell-binding assay (CBA)	Negative
AMPIS	AMPA-R Ab IF Titer Assay, S	IFA	<1:120
AMIBS	Amphiphysin Immunoblot, S	IB	Negative
AN1BS	ANNA-1 Immunoblot, S	IB	Negative
AN2BS	ANNA-2 Immunoblot, S	IB	Negative
CS2CS	CASPR2-IgG CBA, S	CBA	Negative
CRMWS	CRMP-5-IgG Western Blot, S	Western blot	Negative
DPPCS	DPPX Ab CBA, S	CBA	Negative
DPPIS	DPPX Ab IFA, S	IFA	Negative
DPPTS	DPPX Ab IFA Titer, S	IFA	<1:240
GABCS	GABA-B-R Ab CBA, S	CBA	Negative
GABIS	GABA-B-R Ab IF Titer Assay, S	IFA	<1:120
GD65S	GAD65 Ab Assay, S	RIA	< or =0.02 nmol/L Reference values apply to all ages
LG1CS	LGI1-IgG CBA, S	CBA	Negative
GL1CS	mGluR1 Ab CBA, S	CBA	Negative
GL1IS	mGluR1 Ab IFA, S	IFA	Negative
GL1TS	mGluR1 Ab IFA Titer, S	IFA	<1:240
NMDCS	NMDA-R Ab CBA, S	CBA	Negative
NMDIS	NMDA-R Ab IF Titer Assay, S	IFA	<1:120
PC1BS	PCA-1 Immunoblot, S	IB	Negative
PCTBS	PCA-Tr Immunoblot, S	IB	Negative

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

Note: Titers lower than 1:240 are detectable by recombinant CRMP-5 Western blot analysis. CRMP-5 Western blot analysis will be done on request on stored serum (held 4 weeks). This supplemental testing is recommended in

cases of chorea, vision loss, cranial neuropathy, and myelopathy. Call the Neuroimmunology Laboratory at 800-533-1710 to request CRMP-5 Western blot.

Interpretation

Antibodies directed at onconeural proteins shared by neurons, glia, muscle, and certain cancers are valuable serological markers of a patient's immune response to cancer. They are not found in healthy subjects, and are usually accompanied by subacute neurological symptoms and signs. Several autoantibodies have a syndromic association, but no autoantibody predicts a specific neurological syndrome. Conversely, a positive autoantibody profile has 80% to 90% predictive value for a specific cancer. It is not uncommon for more than one paraneoplastic autoantibody to be detected, each predictive of the same cancer.

Cautions

Negative results do not exclude cancer.

This evaluation does not include Ma2 autoantibody (alias: MaTa). Ma2 autoantibody has been described in patients with brainstem and limbic encephalitis in the context of testicular germ cell neoplasms. Scrotal ultrasound is advisable in men who present with unexplained subacute encephalitis. N-methyl-D-asparate receptor antibodies have been reported in women with paraneoplastic encephalitis related to ovarian teratoma.

Clinical Reference

1. McKeon A, Pittock SJ: Paraneoplastic encephalomyelopathies: pathology and mechanisms. Acta Neuropathol 2011;122:381-400

2. Horta ES, Lennon VA, Lachance DH, et al: Neural autoantibody clusters aid diagnosis of cancer. Clin Cancer Res 2014;20:3862-3869

Performance

Method Description

Indirect Immunofluorescence Assay:

The patient's specimen is tested by a standardized indirect immunofluorescence assay (IFA) that uses a composite frozen section of mouse cerebellum, kidney, and gut tissues. After incubation with specimen and washing, fluorescein-conjugated goat-antihuman IgG is applied. Neuron-specific autoantibodies are identified by their characteristic fluorescence staining patterns.. Samples that are scored positive for any neuronal nuclear or cytoplasmic autoantibody are titrated to an endpoint. Interference by coexisting non-neuron-specific autoantibodies can usually be eliminated by serologic absorption.(Honorat JA, Komorowski L, Josephs KA, et al: IgLON5 antibody: neurological accompaniments and outcomes in 20 patients. Neurol Neuroimmunol Neuroinflamm 2017 Jul 18;4(5):e385. doi: 10.1212/NXI.0000000000000385

Radioimmunoassay:

Duplicate aliquots of patient specimen are incubated with I(125)-labeled antigen. Immune complexes, formed by adding secondary (goat) antihuman immunoglobulin, are pelleted by centrifugation and washed. Gamma emission from the washed pellet is counted, and mean counts per minute (cpm) are compared with results yielded by high positive and negative control sera. Specimen yielding cpm higher than the background cpm yielded by normal human specimen are retested to confirm positivity and titrated as necessary to obtain a value in the linear range of the assay. The antigen binding capacity (nmol per liter) is calculated from the cpm precipitated at a dilution yielding a linear range value.(Vernino S, Kryzer TJ, Lennon AV: Chapter 114: Autoimmune autonomic neuropathy and

neuromuscular hyperexcitability disorders. In Manual of Clinical and Laboratory Immunology. Sixth edition. Edited by NR Rose, RG Hamilton, B Detrick. ASM Press,Â 2002, pp 1013-1017; Jones AL, Flanagan EP, Pittock SJ, et al: Responses to and Outcomes of Treatment of Autoimmune Cerebellar Ataxia in Adults. JAMA Neurol 2015 Nov;72[11]:1304-1312 doi: 10.1001/jamaneurol.2015.2378)

Live-cell Assay:

Acetylcholine receptor modulating antibodies (muscle AChR) are detected by incubating the patient's serum for 14 hours with viable, noninnervated, monolayer cultures of human muscle cells. Percent loss of surface AChR is then quantitated by probing with (125)I-alpha-bungarotoxin.(Howard FM Jr, Lennon VA, Finley J, et al: Clinical correlations of antibodies that bind, block, or modulate human acetylcholine receptors in myasthenia gravis. Ann NY Acad Sci 1987;505:526-538; Kang S, Oh JH, Song SK, et al: Both binding and blocking antibodies correlate with disease severity in myasthenia gravis. Neurol Sci 2015; 36:1167-1171)

Enzyme-Linked Immunosorbent Assay:

A mixture of sarcomeric proteins extracted from innervated rat skeletal muscle is used as antigen to detect striational antibodies (IgG, IgM, and IgA).(Cikes N, Momoi MY, Williams CL, et al: Striational autoantibodies: quantitative detection by enzyme-linked immunosorbent assay in myasthenia gravis, thymoma, and recipients of D-penicillamine or allogeneic bone marrow. Mayo Clin Proc 1988;63:474-481; McKeon A, Lennon V, LaChance DH, et al: Striational antibodies in a paraneoplastic contextÂ Muscle Nerve. 2013 Apr;47(4):585-587)

Western Blot:

Neuronal antigens extracted aqueously from adult rat cerebellum, full-length recombinant human collapsin response-mediator protein-5 (CRMP-5), or full-length recombinant human amphiphysin protein is denatured, reduced, and separated by electrophoresis on 10% polyacrylamide gel. IgG is detected autoradiographically by enhanced chemiluminescence. (Yu Z, Kryzer TJ, Griesmann GE, et al: CRMP-5 neuronal autoantibody: marker of lung cancer and thymoma-related autoimmunity. Ann Neurol 2001 February;49[2]:146-154; Dubey D, Jitprapaikulsan J, Bi H, et al: Amphiphysin-IgG autoimmune neuropathy: A recognizable clinicopathologic syndrome. Neurology 2019 Oct 17 pii: 10.1212/WNL.0000000000008472. doi: 10.1212/WNL.0000000000008472)

Immunoblot:

All steps are performed at room temperature (18-28Â°C) utilizing the EUROBlot One instrument. Diluted patient serum (1:12.5) is added to test strips (strips containing recombinant antigen manufactured and purified using biochemical methods) in individual channels and incubated for 30 minutes. Positive serums will bind to the purified recombinant antigen and negative serums will not bind. Strips are washed to remove unbound serum antibodies and then incubated with anti-human IgG antibodies (Alkaline phosphatase-labelled) and incubated for 30 minutes. The strips are again washed to remove unbound anti-human IgG antibodies and Nitroblue tetrazolium chloride/5-Bromo-4-chloro-3-indolylphosphate (NBT/BCIP) substrate is added. Alkaline phosphatase enzyme converts the soluble substrate into a colored insoluble product on the membrane to produces a black band. Strips are digitized via picture capture on the EUROBlot One instrument and evaluated with the EUROLineScan software.(O'Connor K, Waters P, Komorowski L, et al: GABAA receptor autoimmunity: A multicenter experience. Neurol Neuroimmunol Neuroinflamm 2019 Apr 4;6[3]:e552 doi: 10.1212/NXI.0000000000000552)

Cell-Binding Assay:

Patient serum is applied to a composite slide containing transfected and nontransfected HEK-293 cells. After incubation and washing, fluorescein-conjugated goat-antihuman IgG is applied to detect the presence of patient IgG binding.(Package insert: IIFT: Neurology Mosaics, Instructions for the indirect immunofluorescence test. EUROIMMUN, Lubeck, Germany, FA_112d-1_A_UK_C13, 02/2019)

PDF Report

No

Day(s) and Time(s) Test Performed

AGN1S, AMPHS, AMPIS, ANN1S, ANN2S, ANN3S, CRMS, DPPIS, DPPTS, GABIS, GL1IS, GL1TS, NMDIS, PCAB2, PCABP, PCATR:

Monday through Friday; 5 a.m., 7 a.m., 5 p.m.

Saturday, Sunday; 6 a.m.

STR:

Monday through Friday; 4 a.m., 3 p.m.

Saturday, Sunday; 6 a.m.

ARBI, CCN, CCPQ, GANG, VGKC:

Monday through Friday; 6 a.m., 8 a.m., 6 p.m.

Saturday, Sunday; 7 a.m.

CRMWS:

Monday through Friday; 8 a.m.

AGNBS, AMIBS, AN1BS, AN2BS, PC1BS, PCTBS:

Monday through Friday; 6 p.m.

GD65S:

Monday through Friday; 5 a.m., 2 p.m.

Saturday, Sunday; 7 a.m.

ARMO:

Monday through Thursday; 1 p.m.

Saturday; 8 a.m.

AMPCS, CS2CS, DPPCS, GABCS, LG1CS, NMDCS:

Monday through Friday; 10 p.m.Â Â Â Â Â Â Â Â Â Â Â

Sunday; 10 p.m.

GL1CS:

Monday, Thursday; 6 p.m.

Analytic Time

10 days

Maximum Laboratory Time

17 days

Specimen Retention Time

28 days

Performing Laboratory Location

Rochester

Fees and Codes

Fees

- Authorized users can sign in to Test Prices for detailed fee information.
- Clients without access to Test Prices can contact Customer Service 24 hours a day, seven days a week.
- Prospective clients should contact their Regional Manager. For assistance, contact Customer Service.

Test Classification

This test was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. This test has not been cleared or approved by the U.S. Food and Drug Administration.

CPT Code Information

83519 x 4

86255 x 9

83520

83519-ARBI (if appropriate)

83519-ARMO (if appropriate)

84182-AGNBS (if appropriate)

86255-AMPCS (if appropriate)

86256-AMPIS (if appropriate)

84182-AMIBS (if appropriate)

84182-AN1BS (if appropriate)

84182-AN2BS (if appropriate)

86255-CS2CS (if appropriate)

84182-CRMWS (if appropriate)

86255-DPPCS (if appropriate)

86256-DPPTS (if appropriate)

86255-DPPIS (if appropriate)

86255-GABCS (if appropriate)

86256-GABIS (if appropriate)

86341-GD65S (if appropriate)

86255-LG1CS (if appropriate)

86255-GL1CS (if appropriate)

86256-GL1TS (if appropriate)

86255-GL1IS (if appropriate)

86255-NMDCS (if appropriate)

86256-NMDIS (if appropriate)

84182-PC1BS (if appropriate)

84182-PCTBS (if appropriate)

LOINC® Information

Test ID	Test Order Name	Order LOINC Value
PAVAL	Paraneoplastic Autoantibody Eval, S	43104-9

Result ID	Test Result Name	Result LOINC Value
80776	ANNA-2, S	94343-1
83137	ANNA-3, S	94344-9
81184	N-Type Calcium Channel Ab	94348-0
81185	P/Q-Type Calcium Channel Ab	94349-8
83077	CRMP-5-IgG, S	94815-8
84321	AChR Ganglionic Neuronal Ab, S	94694-7
29347	Interpretive Comments	57771-8
83138	PCA-2, S	94351-4
9477	PCA-1, S	94350-6
83076	PCA-Tr, S	94352-2
8746	Striational (Striated Muscle) Ab, S	94817-4
89165	Neuronal (V-G) K+ Channel Ab, S	94816-6

Result ID	Test Result Name	Result LOINC Value
89080	AGNA-1, S	94341-5
81722	Amphiphysin Ab, S	94340-7
80150	ANNA-1, S	94342-3
36349	Reflex Added	77202-0