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**Lab Dept:** Other Fluids

**Test Name:** PARANEOPLASTIC AUTOANTIBODY  
EVALUATION, CSF

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**General Information**

**Lab Order Codes:** PAC1

**Synonyms:** Paraneoplastic Autoantibody Eval, Spinal Fluid

**CPT Codes:** 86255 x9 – Fluorescent noninfectious agent, antibody screen, each antibody

Possible reflex testing (at an additional charge):

83519 – Immunoassay for analyte; quantitative

84182 x3 – Western blot, with interpretation and report, each

886255 x9 – Fluorescent noninfectious agent, antibody screen, each antibody

86256 x5 – Fluorescent noninfectious agent, titer, each antibody

86341 – GAD65 antibody assay

**Test Includes:** If indirect immunofluorescence assay (IFA) (ANN1C, ANN2CC, ANN3C, PCA1C, PCTRC, AMPHC, CRMC, AGN1C) is indeterminate, then paraneoplastic autoantibody Western blot is performed at an additional charge.

If IFA patterns suggest CRMP-5-IgG, then CRMP-5-IgG Western blot is performed at an additional charge.

If IFA patterns suggests GAD65 antibody, GAD65 antibody radioimmunassay is performed at an additional charge.

If IFA patterns suggest neuronal voltage-gated potassium channel-complex autoantibody, then VGKC-complex antibody IPA is performed at an additional charge.

If VGKCC is greater than 0.00 nmol/L, then LGI1-IgG cell-binding assay (CBA) and CASPR2-IgG CBA are performed at an additional charge.

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

If IFA pattern suggests NMDA-R, then NMDA-R antibody CBA and/or NMDA-R titer is performed at an additional charge.

If IFA pattern suggests AMPA-R, then AMPA-R Ab CBA and/or AMPA-R Ab IF Titer Assay is performed at an additional charge.

If IFA pattern suggests GABA-B-R, then GABA-B-R Ab CBA and/or GABA-B-R Ab IF Titer Assay is performed at an additional charge.

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

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

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### ***Logistics***

<b>Test indications:</b>	Aids in the diagnosis of paraneoplastic neurological autoimmune disorders related to carcinoma of lung, breast, ovary, thymoma, or Hodgkin lymphoma in spinal fluid specimens.
<b>Lab Testing Sections:</b>	Other Fluids - Sendouts
<b>Referred to:</b>	Mayo Clinic Laboratories (Mayo test: PAC1)
<b>Phone Numbers:</b>	MIN Lab: 612-813-6280 STP Lab: 651-220-6550
<b>Test Availability:</b>	Daily, 24 hours
<b>Turnaround Time:</b>	8 – 11 1days
<b>Special Instructions:</b>	In patients with a history of tobacco use or other lung cancer risk, or if thymoma is suspected, <a href="#">Paraneoplastic Autoantibody Evaluation, Serum</a> is also recommended.

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### ***Specimen***

<b>Specimen Type:</b>	CSF
<b>Container:</b>	Screw-capped, sterile, plastic vial
<b>Draw Volume:</b>	4.0 mL (Minimum: 2.0 mL) CSF
<b>Processed Volume:</b>	Same as Draw Volume
<b>Collection:</b>	Routine CSF collection
<b>Special Processing:</b>	Lab Staff: Aliquot 4.0 (min: 2.0) mL CSF. Store and ship refrigerated in plastic vial.
<b>Patient Preparation:</b>	None
<b>Sample Rejection:</b>	Mislabeled or unlabeled specimens

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**Interpretive****Reference Range:**

<b>Antibody:</b>	<b>Reference Value:</b>
Amphiphysin Ab	<1:2
Anti-Glial Nuclear Ab Type 1	<1:2
Anti-Neuronal Nuclear Ab Type 1	<1:2
Anti-Neuronal Nuclear Ab Type 2	<1:2
Anti-Neuronal Nuclear Ab Type 3	<1:2
CRMP-5-IgG	<1:2
Purkinje Cell Cytoplasmic Ab Type Tr	<1:2
Purkinje Cell Cytoplasmic Ab Type 1	<1:2
Purkinje Cell Cytoplasmic Ab Type 2	<1:2
Amphiphysin Western Blot	Negative
AMPA-R Ab CBA	Negative
AMPA-R Ab IF Titer Assay	<1:2
CRMP-5-IgG Western Blot	Negative
CASPR2-IgG CBA	Negative
DPPX Ab CBA	Negative
DPPX Ab IFA Titer	<1:2
GABA-B-R Ab CBA	Negative
GABA-B-R Ab IF Titer Assay	<1:2
GAD65 Ab Assay	< or =0.02 nmol/L
mGluR1 Ab CBA	Negative
mGluR1 Ab IFA Titer	<1:2

**Reflex Reference Ranges:**

LGI1-IgG CBA	Negative
NMDA-R Ab CBA	Negative
NMDA-R Ab IF Titer Assay	<1:2
VGKC-complex Ab IPA	< or =0.02 nmol/L
Paraneoplastic Autoantibody Western Blot	Negative
<p>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 anti-neuronal IgG.” Complex patterns that include non-neuronal elements may be reported as “uninterpretable.”</p>	

**Limitations:** N/A

**Methodology:** Indirect immunofluorescence Assay (IFA), Radioimmunoassay (RIA), Immunoblot (IB), Cell Binding Assay (CBA), NMO-IgG Fluorescence-Activated Cell Sorting Assay (FACS), MOG-IgG1 Fluorescence-Activated Cell Sorting Assay (FACS), Immunoprecipitation Assay (IPA)

**References:** [Mayo Clinic Laboratories](#) (May 2020)