
Lab Dept: Serology

Test Name: PEDIATRIC AUTOIMMUNE CNS EVALUATION

General Information

Lab Order Codes: PCDES

Synonyms: Autoimmune Central Nervous System Evaluation, Pediatric

CPT Codes: 83519 x3 – Immunoassay for analyte other than infectious agent antibody or infectious agent antigen, quantitative by radioimmunoassay
86341 – Islet cell antibody
86255 x11 – Fluorescent noninfectious agent, antibody screen, each antibody

Possible reflex testing (at an additional additional charge):

84182 x6 – Western blot, with interpretation and report, each
86255 x10 – Fluorescent noninfectious agent, antibody screen, each antibody
86256 x7 – Fluorescent noninfectious agent, titer, each antibody

Test Includes: If indirect immunofluorescence assay (IFA) patterns suggest ANNA-1 antibody, then ANNA-1 Immunoblot and ANNA-2 Immunoblot are performed at an additional charge.

If IFA patterns suggest ANNA-2 antibody, then ANNA-2 immunoblot, ANNA1 immunoblot, and ANNA-2 antibody IFA are performed at an additional charged.

If IFA patterns suggest ANNA-3 antibody, then ANNA-3 IFA is performed at an additional charge.

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

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

If IFA patterns suggest amphiphysin antibody, then amphiphysin immunoblot and amphiphysin antibody IFA titer are performed at an additional charge.

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

If IFA pattern suggests AMPA-R antibody, then AMPA-R antibody cell-binding assay (CBA) and AMPA-R IFA titer are performed at an additional charge.

If IFA pattern suggest GABA-B-R antibody, then GABA-B-R IFA titer is performed at an additional charge.

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

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

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

If NMO/AQP4-IgG fluorescence-activated cell sorting (FACS) screen assay requires further investigation, then NMO/AQP4-IgG FACS titration assay is performed at an additional charge.

If MOG FACS screen assay requires further investigation, then MOG FACS titration assay is performed at an additional charge.

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Logistics

Test indications: Evaluating children with autoimmune central nervous system disorders using serum specimens

Lab Testing Sections: Serology - Sendouts

Referred to: Mayo Clinic Laboratories (MML Test: PCDES)

Phone Numbers: MIN Lab: 612-813-62

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: Results in 4-10 days

Special Instructions: Gross hemolysis; grossly icteric; mislabeled or unlabeled specimens

Specimen

Specimen Type:	Blood
Container:	SST (Marble, gold or red)
Draw Volume:	12 mL (Minimum: 6 mL) blood
Processed Volume:	4 mL (Minimum: 2 mL) serum
Collection:	Routine blood collection
Special Processing:	Lab Staff: Centrifuge specimen, remove serum from cells, aliquot into a screw-capped round bottom vial. Store and ship at refrigerated temperatures.
Patient Preparation:	None
Sample Rejection:	Gross hemolysis; grossly icteric; mislabeled or unlabeled specimens

Interpretive**Reference Range:**

Antibody:	Reference Range:
AChR Ganglionic Neuronal Ab	< or =0.02 nmol/L
ANNA-1	<1:240*
CASPR2-IgG CBA	Negative
DPPX Ab IFA	Negative
GABA-B-R Ab CBA	Negative
GAD65 Ab	< or =0.02 nmol/L
GFAP IFA	Negative
LGI1-IgG CBA	Negative
mGluR1 Ab IFA	Negative
MOG FACS	Negative
NMDA-R Ab CBA	Negative
NMO/AQP4 FACS	Negative

**Reflex Reference
Range:**

N-Type Calcium Channel Ab	< or =0.03 nmol/L
P/Q-Type Calcium Channel Ab	< or =0.02 nmol/L
PCA-Tr	<1:240*
An interpretation will be provided	
*Neuron-restricted patterns of IgG staining that do not fulfill criteria for ANNA-1, ANNA-2, PCA-1, PCA-2 or PCA-Tr may be reported as "unclassified anti-neuronal IgG". Complex patterns that include non-neuronal elements may be reported as "uninterpretable".	
AMPA-R Ab CBA	Negative
Amphiphysin Ab	<1:240
AMPA-R Ab IF Titer	<1:120
ANNA-1 Immunoblot	Negative
ANNA-2 Immunoblot	Negative
ANNA-2	<1:240*
ANNA-3	<1:240*
DPPX Ab CBA	Negative
DPPX Ab IFA Titer	<1:240
GFAP CBA	Negative
GFAP IFA Titer	<1:240
mGluR1 Ab CBA	Negative
mGluR1 Ab IFA Titer	<1:240
MOG FACS Titer	<1:20
NMDA-R Ab IF Titer	<1:120
NMO/AQP4 FACS Titer	<1:5
PCA-1 Immunoblot	Negative

PCA-2	<1:240*
PCA-1	<1:240*
PCA-Tr Immunoblot	Negative
*Neuron-restricted patterns of IgG staining that do not fulfill criteria for ANNA-1, ANNA-2, PCA-1, PCA-2 or PCA-Tr may be reported as "unclassified anti-neuronal IgG". Complex patterns that include non-neuronal elements may be reported as "uninterpretable".	

Limitations: Negative results do not exclude a diagnosis of autoimmune central nervous disorder.

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)

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