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PATIENT REPORT

Patient Age/Sex: Unknown

Specimen Collected: 2/6/2025 09:36 MST

Autoimmune Pediatric CNS Disorders, CSF | **Received: 2/6/2025 09:36 MST** | **Report/Verified: 2/6/2025 10:04 MST**

Procedure	Result	Units	Reference Interval
NMDA Receptor Ab IgG CBA-IFA,CSF	1:160 * f1 i1		[< 1:1]
Paraneoplastic Abs (PCCA/ANNA) IgG,CSF	PCCA Detected * f2 i2		[None Detected]
NMO/AQP4 Ab IgG CBA-IFA Screen, CSF	Detected * t1 i3		[< 1:1]
AMPA Receptor Ab IgG CBA-IFA Screen,CSF	Detected * t2 i4		[< 1:1]
GABA-BR Ab IgG CBA-IFA Screen, CSF	Detected * t3 i5		[< 1:1]
CASPR2 Ab IgG CBA-IFA Screen,CSF	Detected * t4 i6		[< 1:1]
LGI1 Ab IgG CBA-IFA Screen,CSF	Detected * t5 i7		[< 1:1]
DPPX Ab IgG CBA-IFA Screen,CSF	Detected * t6 i8		[< 1:1]
GABA-AR Ab IgG CBA-IFA Screen, CSF	Detected * t7 i9		[< 1:1]
mGluR1 Ab IgG CBA-IFA Screen,CSF	Detected * t8 i10		[< 1:1]
Glutamic Acid Decarboxylase Antibody CSF	10.0 H i11	IU/mL	[0.0-5.0]

Neuronal Ab (TR/DNER) IgG, CSF | **Received: 2/6/2025 09:36 MST** | **Report/Verified: 2/6/2025 10:04 MST**

Procedure	Result	Units	Reference Interval
Neuronal Ab (TR/DNER) IgG,CSF	High Positive * i12		[Negative]

Neuronal Nuclear Ab, Immunoblot, Hu CSF | **Received: 2/6/2025 09:36 MST** | **Report/Verified: 2/6/2025 10:04 MST**

Procedure	Result	Units	Reference Interval
Neuronal Nuclear Ab (Hu) IgG,IB, CSF	Positive * i13		[Negative]

Purkinje Cell Antibody Titer, CSF | **Received: 2/6/2025 09:36 MST** | **Report/Verified: 2/6/2025 10:04 MST**

Procedure	Result	Units	Reference Interval
Purkinje Cell Antibody Titer IgG,CSF	1:20 * i14		[< 1:1]

AMPA Rptr Ab IgG Titer by CBA-IFA, CSF | **Received: 2/6/2025 09:36 MST** | **Report/Verified: 2/6/2025 10:05 MST**

Procedure	Result	Units	Reference Interval
AMPA Receptor Ab IgG CBA-IFA Titer,CSF	1:5 * i15		[< 1:1]

CASPR2 Ab IgG Titer by CBA-IFA, CSF | **Received: 2/6/2025 09:36 MST** | **Report/Verified: 2/6/2025 10:05 MST**

Procedure	Result	Units	Reference Interval
CASPR2 Ab IgG CBA-IFA Titer,CSF	1:160 * i16		[< 1:1]

*=Abnormal, #=Corrected, C=Critical, f=Result Footnote, H-High, i-Test Information, L-Low, t-Interpretive Text, @=Performing lab

NMO/AQP4-Ab IgG Titer by CBA-IFA, CSF	**Received: 2/6/2025 09:36 MST**		**Report/Verified: 2/6/2025 10:05 MST**
Procedure	**Result**	**Units**	**Reference Interval**
NMO/AQP4 Ab IgG CBA-IFA Titer, CSF	1:20 * i17		[< 1:1]

DPPX Ab IgG Titer by CBA-IFA, CSF	**Received: 2/6/2025 09:36 MST**		**Report/Verified: 2/6/2025 10:05 MST**
Procedure	**Result**	**Units**	**Reference Interval**
DPPX Ab IgG CBA-IFA Titer,CSF	1:80 * i18		[< 1:1]

GABA-A Receptor IgG CBA-IFA Titer, CSF	**Received: 2/6/2025 09:36 MST**		**Report/Verified: 2/6/2025 10:05 MST**
Procedure	**Result**	**Units**	**Reference Interval**
GABA-AR Ab IgG CBA-IFA Titer,CSF	1:80 * i19		[< 1:1]

GABA-B Rptr Ab IgG Titer by CBA-IFA, CSF	**Received: 2/6/2025 09:36 MST**		**Report/Verified: 2/6/2025 10:05 MST**
Procedure	**Result**	**Units**	**Reference Interval**
GABA-BR Ab IgG CBA-IFA Titer,CSF	1:640 * i20		[< 1:1]

LGI1 Ab IgG Titer by CBA-IFA, CSF	**Received: 2/6/2025 09:36 MST**		**Report/Verified: 2/6/2025 10:05 MST**
Procedure	**Result**	**Units**	**Reference Interval**
LGI1 Ab IgG CBA-IFA Titer,CSF	1:320 * i21		[< 1:1]

mGluR1 Ab IgG CBA-IFA Titer, CSF	**Received: 2/6/2025 09:36 MST**		**Report/Verified: 2/6/2025 10:05 MST**
Procedure	**Result**	**Units**	**Reference Interval**
mGluR1 Ab IgG CBA-IFA Titer,CSF	1:20 * i22		[< 1:1]

Interpretive Text

t1: 2/6/2025 09:36 MST (NMO/AQP4 Ab IgG CBA-IFA Screen, CSF)
Aquaporin-4 Receptor Antibody, IgG is detected. Titer results to follow.

t2: 2/6/2025 09:36 MST (AMPA Receptor Ab IgG CBA-IFA Screen, CSF)
AMPAR Antibody, IgG is detected. Titer results to follow.

t3: 2/6/2025 09:36 MST (GABA-BR Ab IgG CBA-IFA Screen, CSF)
GABA-BR Antibody, IgG is detected. Titer results to follow.

t4: 2/6/2025 09:36 MST (CASPR2 Ab IgG CBA-IFA Screen, CSF)
CASPR2 Antibody, IgG is detected. Titer results to follow.

t5: 2/6/2025 09:36 MST (LGI1 Ab IgG CBA-IFA Screen, CSF)
LGI1 Antibody, IgG is detected. Titer results to follow.

t6: 2/6/2025 09:36 MST (DPPX Ab IgG CBA-IFA Screen, CSF)
DPPX Antibody, IgG is detected. Titer results to follow.

t7: 2/6/2025 09:36 MST (GABA-AR Ab IgG CBA-IFA Screen, CSF)
GABA-AR Antibody, IgG is detected. Titer results to follow.

t8: 2/6/2025 09:36 MST (mGluR1 Ab IgG CBA-IFA Screen, CSF)
mGluR1 Antibody, IgG is detected. Titer results to follow.

Result Footnote

f1: NMDA Receptor Ab IgG CBA-IFA, CSF

Antibodies to NMDA were detected; titer was performed at an additional charge.

*=Abnormal, #=Corrected, C=Critical, f=Result Footnote, H-High, i-Test Information, L-Low, t-Interpretive Text, @=Performing lab

Result Footnote

f1: NMDA Receptor Ab IgG CBA-IFA, CSF
The ExTINGUISH Trial (safety and efficacy of Inebilizumab in anti-NMDA receptor encephalitis, NCT04372615) is actively recruiting patients. To learn more, or to refer your patient, call 1-844-427-2465, email ExTINGUISH@hsc.utah.edu, or visit https://neuronext.org/projects/nn111-extinguish.
f2: Paraneoplastic Abs (PCCA/ANNA) IgG, CSF

Antibodies detected, therefore IFA titer and Immunoblot testing to be performed.

Test Information

i1: NMDA Receptor Ab IgG CBA-IFA, CSF
INTERPRETIVE INFORMATION: NMDA Receptor Ab IgG CBA-IFA, CSF

NMDA receptor antibody is found in a subset of patients with autoimmune limbic encephalitis and may occur with or without associated tumor. Decreasing antibody levels may be associated with therapeutic response. In addition, positive results have been reported in patients with non-autoimmune phenotypes. A negative test result does not rule out a diagnosis of autoimmune limbic encephalitis. Results should be interpreted in correlation with the patient's clinical history and other laboratory findings.

This indirect fluorescent antibody assay utilizes full-length GluN1 transfected cell lines for the detection and semiquantification of NMDA receptor IgG antibody.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

i2: Paraneoplastic Abs (PCCA/ANNA) IgG, CSF
INTERPRETIVE INFORMATION: Paraneoplastic Abs (PCCA/ANNA) IgG, CSF

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

i3: NMO/AQP4 Ab IgG CBA-IFA Screen, CSF
INTERPRETIVE INFORMATION: NMO/AQP4 Ab IgG CBA-IFA Screen, CSF
Neuromyelitis optic (NMO) commonly presents with optic neuritis or longitudinally extensive transverse myelitis. Approximately 75 percent of patients with NMO have antibodies to the aquaporin-4 (AQP4) receptor. While the absence of AQP4 receptor antibodies does not rule out a diagnosis of NMO, presence of this antibody is diagnostic for NMO.

This indirect fluorescent antibody assay utilizes AQP4 receptor transfected cell lines for the detection and semiquantification of AQP4 IgG antibody.

Test Information

i3: NMO/AQP4 Ab IgG CBA-IFA Screen, CSF

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

i4: AMPA Receptor Ab IgG CBA-IFA Screen, CSF

INTERPRETIVE INFORMATION: AMPA Receptor Ab IgG CBA-IFA Screen, CSF

Alpha-amino-3-hydroxy-5-methyl-4-isoxazoleproprionic acid receptor (AMPAR) antibody is found in a subset of patients with autoimmune limbic encephalitis and may occur with or without associated tumor. Decreasing antibody levels may be associated with therapeutic response. A negative test result does not rule out a diagnosis of autoimmune encephalitis. Results should be interpreted in correlation with the patient's clinical history and other laboratory findings.

This indirect fluorescent antibody assay utilizes AMPAR transfected cell lines for detection and semiquantification of AMPAR IgG antibody.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

i5: GABA-BR Ab IgG CBA-IFA Screen, CSF

INTERPRETIVE INFORMATION: GABA-BR Ab IgG CBA-IFA Screen, CSF

Gamma-amino butyric acid receptor, type B (GABA-BR) antibody is found in a subset of patients with autoimmune epilepsy and other autoimmune neurologic phenotypes; it may occur with or without associated tumor. Decreasing antibody levels may be associated with therapeutic response. A negative test result does not rule out a diagnosis of autoimmune neurologic disease. Results should be interpreted in correlation with the patient's clinical history and other laboratory findings.

This indirect fluorescent antibody assay utilizes GABA-BR transfected cell lines for the detection and semiquantification of GABA-BR IgG antibody.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

i6: CASPR2 Ab IgG CBA-IFA Screen, CSF

INTERPRETIVE INFORMATION: CASPR2 Ab IgG CBA-IFA Screen, CSF

Contactin-associated protein-2 (CASPR2) IgG antibody may occur as part of the voltage-gated potassium channel (VGKC) complex antibodies.

Test Information

i6: CASPR2 Ab IgG CBA-IFA Screen, CSF

The presence of CASPR2 IgG antibody is associated with a wide spectrum of clinical manifestations, including acquired neuromyotonia, limbic encephalitis, painful neuropathy, and Morvan syndrome. Tumors such as thymoma, small cell lung cancer, and other rarer tumors may occur. The full-spectrum of clinical disorders and tumors associated with the CASPR2 IgG antibody continues to be defined. Results should be interpreted in correlation with the patient's clinical history and other laboratory findings.

This indirect fluorescent antibody assay utilizes CASPR2 transfected cell lines for the detection and semiquantification of the CASPR2 IgG antibody.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

i7: LGI1 Ab IgG CBA-IFA Screen, CSF

INTERPRETIVE INFORMATION: LGI1 Ab IgG CBA-IFA Screen, CSF

Leucine-rich, glioma-inactivated 1 protein (LGI1) IgG antibody may occur as part of the voltage-gated potassium channel (VGKC) complex antibodies.

The presence of LGI1 IgG antibody is mainly associated with limbic encephalitis, hyponatremia, and myoclonic movements. LGI1 IgG antibody is rarely associated with tumors but may occur infrequently in Morvan syndrome, neuromyotonia, and idiopathic epilepsy. The full-spectrum of clinical disorders associated with the LGI1 IgG antibody continues to be defined. Results should be interpreted in correlation with the patient's clinical history and other laboratory findings.

This indirect fluorescent antibody assay utilizes LGI1 transfected cell lines for the detection and semi-quantification of the LGI1 IgG antibody.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

i8: DPPX Ab IgG CBA-IFA Screen, CSF

INTERPRETIVE INFORMATION: DPPX Ab IgG CBA-IFA Screen, CSF

DPPX antibody is found in a subset of patients with autoimmune encephalitis, and is often associated with prodromal gastrointestinal symptoms and unintentional weight loss. It may occur with or without associated tumor. Decreasing antibody levels may be associated with therapeutic response. A negative test result does not rule out a diagnosis of autoimmune neurologic disease. Results should be interpreted in correlation with the patient's clinical history and other laboratory findings.

Test Information

i8: DPPX Ab IgG CBA-IFA Screen, CSF

This indirect fluorescent antibody assay utilizes DPPX transfected cells for the detection and semiquantification of the DPPX IgG antibody.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the U.S. Food and Drug Administration. This test was performed in a CLIA-certified laboratory and is intended for clinical purposes.

i9: GABA-AR Ab IgG CBA-IFA Screen, CSF

INTERPRETIVE INFORMATION: GABA-AR Ab IgG CBA-IFA Screen, CSF

Gamma-aminobutyric acid receptor, type A (GABA-AR) antibody is found in a subset of patients with autoimmune encephalitis or autoimmune epilepsy, and may occur with or without associated tumor. A negative test result does not rule out a diagnosis of autoimmune limbic encephalitis or autoimmune epilepsy. Interpretation of any anti-neural antibody test requires clinical correlation.

This indirect fluorescent antibody assay utilizes GABA-AR transfected cell lines for detection and semi-quantification of GABA-AR IgG antibody.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the U.S. Food and Drug Administration. This test was performed in a CLIA-certified laboratory and is intended for clinical purposes.

i10: mGluR1 Ab IgG CBA-IFA Screen, CSF

INTERPRETIVE INFORMATION: mGluR1 Ab IgG CBA-IFA Screen, CSF

Metabotropic glutamate receptor 1 (mGluR1) antibody is found in a subset of patients with autoimmune cerebellar ataxia or autoimmune encephalitis and may occur with or without associated tumor. A negative test result does not rule out a diagnosis of autoimmune cerebellar ataxia or limbic encephalitis. Interpretation of any anti-neural antibody test requires clinical correlation.

This indirect fluorescent antibody assay utilizes mGluR1 transfected cell lines for detection and semi-quantification of mGluR1 IgG antibody.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the U.S. Food and Drug Administration. This test was performed in a CLIA-certified laboratory and is intended for clinical purposes.

i11: Glutamic Acid Decarboxylase Antibody CSF

INTERPRETIVE INFORMATION: Glutamic Acid Decarboxylase Antibody, CSF

Test Information

i11: Glutamic Acid Decarboxylase Antibody CSF

A value greater than 5.0 IU/mL is considered positive for glutamic acid decarboxylase antibody (GAD AB CSF).

This assay is intended for the semi-quantitative determination of the GAD Ab in human CSF. Results should be interpreted within the context of clinical symptoms.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

i12: Neuronal Ab (TR/DNER) IgG, CSF

INTERPRETIVE INFORMATION: Neuronal Ab (TR/DNER) IgG, CSF

This test detects IgG antineuronal antibodies to Tr (DNER) antigens.

Antineuronal antibodies serve as markers that aid in discriminating between a true paraneoplastic neurological disorder (PND) and other inflammatory disorders of the nervous system. Anti-Tr(DNER) is associated with Hodgkin's lymphoma.

The presence of these antineuronal antibodies supports a clinical diagnosis of PND and should lead to a focused search for the underlying neoplasm.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

i13: Neuronal Nuclear Ab (Hu) IgG, IB, CSF

INTERPRETIVE INFORMATION: Neuronal Nuclear Ab IgG,
Immunoblot, Hu CSF

This test detects IgG antineuronal antibodies to Hu antigens.

Antineuronal antibodies serve as markers that aid in discriminating between a true paraneoplastic neurological disorder (PND) and other inflammatory disorders of the nervous system. Anti-Hu (antineuronal nuclear antibody, type I) is associated with small-cell lung cancer.

The presence of these antineuronal antibodies supports a clinical diagnosis of PND and should lead to a focused search for the underlying neoplasm.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the U.S. Food and Drug Administration. This test was performed in a CLIA-certified laboratory and is intended for clinical purposes.

Test Information

i14: Purkinje Cell Antibody Titer IgG, CSF
INTERPRETIVE INFORMATION: Purkinje Cell Antibody Titer IgG, CSF

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

i15: AMPA Receptor Ab IgG CBA-IFA Titer, CSF
INTERPRETIVE INFORMATION: AMPA Receptor Ab IgG CBA-IFA Titer, CSF
This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

i16: CASPR2 Ab IgG CBA-IFA Titer, CSF
INTERPRETIVE INFORMATION: CASPR2 Ab IgG CBA-IFA Titer, CSF

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

i17: NMO/AQP4 Ab IgG CBA-IFA Titer, CSF
INTERPRETIVE INFORMATION: NMO/AQP4 Ab IgG CBA-IFA Titer, CSF

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

i18: DPPX Ab IgG CBA-IFA Titer, CSF
INTERPRETIVE INFORMATION: DPPX Ab IgG CBA-IFA Titer, CSF

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

i19: GABA-AR Ab IgG CBA-IFA Titer, CSF
INTERPRETIVE INFORMATION: GABA-AR Ab IgG CBA-IFA Titer, CSF

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the U.S. Food and Drug Administration. This test was performed in a CLIA-certified laboratory and is intended for clinical purposes.

i20: GABA-BR Ab IgG CBA-IFA Titer, CSF
INTERPRETIVE INFORMATION: GABA-BR Ab IgG CBA-IFA Titer, CSF

Test Information

i20: GABA-BR Ab IgG CBA-IFA Titer, CSF

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

i21: LGI1 Ab IgG CBA-IFA Titer, CSF

INTERPRETIVE INFORMATION: LGI1 Ab IgG CBA-IFA Titer, CSF

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

i22: mGluR1 Ab IgG CBA-IFA Titer, CSF

INTERPRETIVE INFORMATION: mGluR1 Ab IgG CBA-IFA Titer, CSF

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the U.S. Food and Drug Administration. This test was performed in a CLIA-certified laboratory and is intended for clinical purposes.