

Client: Example Client ABC123  
123 Test Drive  
Salt Lake City, UT 84108  
UNITED STATES

Physician: Doctor, Example

**Patient: Patient, Example**

**DOB:** Unknown  
**Gender:** Unknown  
**Patient Identifiers:** 01234567890ABCD, 012345  
**Visit Number (FIN):** 01234567890ABCD  
**Collection Date:** 00/00/0000 00:00

**Autoimmune Movement Disorder Panel, CSF**

ARUP test code 3006207

N-methyl-D-Aspartate Receptor Ab, CSF

< 1:1

(Ref Interval: < 1:1)

Antibodies to NMDA were not detected, no additional testing to follow.

**INTERPRETIVE INFORMATION: N-methyl-D-Aspartate Receptor Ab, CSF**

Anti-NMDA receptor IgG 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; therefore, clinical correlation must be strongly considered. A negative test result does not rule out a diagnosis of autoimmune limbic encephalitis.

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.

Paraneoplastic Abs (PCCA/ANNA) IgG, CSF

None Detected

(Ref Interval: None Detected)

ANNA-1, ANNA-2, PCCA-1 or PCCA-Tr(DNER) antibodies not detected. No further testing will be performed.

**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.

AMPA Receptor Ab IgG Screen, CSF

< 1:1

(Ref Interval: < 1:1)

AMPA Antibody, IgG is not detected. No further testing will be performed.

**H=High, L=Low, \*=Abnormal, C=Critical**

**INTERPRETIVE INFORMATION: AMPA Receptor Ab IgG Screen, CSF**

Alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid receptor (AMPA) 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; therefore, clinical correlation must be strongly considered. A negative test result does not rule out a diagnosis of autoimmune encephalitis.

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

**GABA-B Receptor Ab IgG Screen, CSF**

< 1:1 (Ref Interval: < 1:1)

GABA-BR Antibody, IgG is not detected. No further testing will be performed.

**INTERPRETIVE INFORMATION: GABA-B Receptor Ab IgG Screen, CSF**

Gamma-amino butyric acid receptor, type B (GABA-BR) 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; therefore, clinical correlation must be strongly considered. A negative test result does not rule out a diagnosis of autoimmune encephalitis.

This indirect fluorescent antibody assay utilizes GABA-BR transfected cell lines for the detection and semi-quantification 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.

**CASPR2 Ab IgG Screen by IFA, CSF**

< 1:1 (Ref Interval: < 1:1)

CASPR2 Antibody, IgG is not detected. No further testing will be performed.

**H=High, L=Low, \*=Abnormal, C=Critical**

INTERPRETIVE INFORMATION: CASPR2 Ab IgG Screen by IFA, CSF

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

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 contactin-associated protein-2 (CASPR2) transfected cell lines for the detection and semi-quantification 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.

LGI1 Ab IgG Screen by IFA, CSF

< 1:1 (Ref Interval: < 1:1)

LGI1 Antibody, IgG is not detected. No further testing will be performed.

INTERPRETIVE INFORMATION: LGI1 Ab IgG Screen by IFA, 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 leucine-rich, glioma-inactivated 1 protein (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.

CV2.1 Ab IgG Screen, CSF

< 1:1 (Ref Interval: < 1:1)

CV2.1 Antibody, IgG is not detected. No further testing will be performed.

**H=High, L=Low, \*=Abnormal, C=Critical**

INTERPRETIVE INFORMATION: CV2.1 IgG Ab Screen, CSF

CV2.1 antibodies aid in discriminating between chronic paraneoplastic neurological disorder (PND) and other inflammatory disorders of the nervous system. Anti-CV2.1 is associated with small-cell lung cancer and thymoma.

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.

SOX1 Antibody, IgG by Immunoblot, CSF

Negative (Ref Interval: Negative)

INTERPRETIVE INFORMATION: SOX1 Antibody, IgG by Immunoblot, CSF

SOX1 antibody is detected in patients with Lambert-Eaton myasthenic syndrome (LEMS) and in patients with paraneoplastic cerebellar degeneration (PCD), paraneoplastic and nonparaneoplastic neuropathy. SOX1 antibody is associated with small cell lung cancer. A negative test result does not rule out a diagnosis of LEMS or other causes of paraneoplastic neurological syndrome.

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.

Amphiphysin Antibody, CSF

Negative (Ref Interval: Negative)

INTERPRETIVE INFORMATION: Amphiphysin Antibody IgG, CSF

Amphiphysin antibody is present in about 5 percent of patients with stiff-person syndrome and is found variably in other causes of paraneoplastic neurological syndrome (PNS). Amphiphysin antibody is mainly associated with small-cell lung cancer and breast tumors.

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.

DPPX Ab IgG CBA IFA Screen, CSF

< 1:1 (Ref Interval: < 1:1)

DPPX Antibody, IgG is not detected. No further testing will be performed.

**H=High, L=Low, \*=Abnormal, C=Critical**

INTERPRETIVE INFORMATION: DPPX Ab IgG CBA IFA Screen, CSF

Anti-DPPX IgG antibody is found in a subset of patients with autoimmune encephalitis and may occur with or without associated tumor. Decreasing antibody levels may be associated with therapeutic response; therefore, clinical correlation must be strongly considered. A negative test result does not rule out a diagnosis of autoimmune limbic encephalitis.

This indirect fluorescent antibody cell-based assay (CBA) utilizes dipeptidyl aminopeptidase-like protein 6 (DPPX) transfected cells for the detection 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 US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

GABA-AR Ab IgG CBA-IFA Screen, CSF

< 1:1 (Ref Interval: < 1:1)

GABA-AR Antibody, IgG is not detected. No further testing will be performed.

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.

ITPR1 Ab IgG CBA-IFA Screen, CSF

< 1:1 (Ref Interval: < 1:1)

ITPR1 Antibody, IgG is not detected. No further testing will be performed.

INTERPRETIVE INFORMATION: ITPR1 Ab IgG CBA-IFA Screen, CSF

Inositol 1, 4, 5-trisphosphate receptor type 1 (ITPR1) antibody is found in a subset of patients with autoimmune cerebellar ataxia, encephalitis, neuropathy, or myelopathy and may occur with or without associated tumor. A negative test result does not rule out a diagnosis of autoimmune cerebellar ataxia or related autoimmune neurologic disorders. Interpretation of any anti-neural antibody test requires clinical correlation.

This indirect fluorescent antibody assay utilizes ITPR1 transfected cell lines for detection and semi-quantification of ITPR1 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.

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**IgLON5 Ab IgG CBA-IFA Screen, CSF**

< 1:1

(Ref Interval: < 1:1)

IgLON5 Antibody, IgG is not detected. No further testing will be performed.

**INTERPRETIVE INFORMATION: IgLON5 Ab IgG CBA-IFA Screen, CSF**

IgLON Family Member 5 (IgLON5) antibody is found in a subset of patients with autoimmune encephalitis or other autoimmune neurologic/neurodegenerative disorders and may occur with or without associated tumor. A negative test result does not rule out a diagnosis of an autoimmune neurologic disorder. Interpretation of any anti-neural antibody test requires clinical correlation.

This indirect fluorescent antibody assay utilizes IgLON5 transfected cell lines for detection and semi-quantification of IgLON5 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.

**mGluR1 Ab IgG CBA-IFA Screen, CSF**

< 1:1

(Ref Interval: < 1:1)

mGluR1 Antibody, IgG is not detected. No further testing will be performed.

**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.

**Glutamic Acid Decarboxylase Antibody CSF**

<5.0 IU/mL

(Ref Interval: 0.0-5.0)

**INTERPRETIVE INFORMATION: 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.

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VERIFIED/REPORTED DATES

Procedure	Accession	Collected	Received	Verified/Reported
N-methyl-D-Aspartate Receptor Ab, CSF	23-135-109178	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Paraneoplastic Abs (PCCA/ANNA) IgG, CSF	23-135-109178	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
AMPA Receptor Ab IgG Screen, CSF	23-135-109178	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
GABA-B Receptor Ab IgG Screen, CSF	23-135-109178	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
CASPR2 Ab IgG Screen by IFA, CSF	23-135-109178	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
LG11 Ab IgG Screen by IFA, CSF	23-135-109178	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
CV2.1 Ab IgG Screen, CSF	23-135-109178	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
SOX1 Antibody, IgG by Immunoblot, CSF	23-135-109178	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Amphiphysin Antibody, CSF	23-135-109178	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
DPPX Ab IgG CBA IFA Screen, CSF	23-135-109178	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
GABA-AR Ab IgG CBA-IFA Screen, CSF	23-135-109178	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
ITPR1 Ab IgG CBA-IFA Screen, CSF	23-135-109178	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
IgLON5 Ab IgG CBA-IFA Screen, CSF	23-135-109178	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
mGluR1 Ab IgG CBA-IFA Screen, CSF	23-135-109178	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Glutamic Acid Decarboxylase Antibody CSF	23-135-109178	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00

END OF CHART

H=High, L=Low, \*=Abnormal, C=Critical

Unless otherwise indicated, testing performed at:

ARUP LABORATORIES | 800-522-2787 | aruplab.com  
500 Chipeta Way, Salt Lake City, UT 84108-1221  
Jonathan R. Genzen, MD, PhD, Laboratory Director

Patient: Patient, Example  
ARUP Accession: 23-135-109178  
Patient Identifiers: 01234567890ABCD, 012345  
Visit Number (FIN): 01234567890ABCD  
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