

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

Physician: Doctor, Example

**Patient: Patient, Example**

**DOB:** 2/15/1984  
**Gender:** Male  
**Patient Identifiers:** 01234567890ABCD, 012345  
**Visit Number (FIN):** 01234567890ABCD  
**Collection Date:** 00/00/0000 00:00

**Autoimmune Neurologic Disease Reflexive Panel, Serum**

ARUP test code 3004070

**Neuronal Antibody (Amphiphysin)**

Negative (Ref Interval: Negative)

INTERPRETIVE INFORMATION: Amphiphysin Antibody, IgG

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.

**Purkinje Cell/Neuronal Nuclear IgG Scrn**

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: Purkinje Cell/Neuronal Nuclear IgG Scrn

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.

**N-methyl-D-Aspartate Receptor Ab, Serum**

<1:10 (Ref Interval: <1:10)

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

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

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

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

<1:10 (Ref Interval: <1:10)

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

**INTERPRETIVE INFORMATION: CASPR2 Ab IgG w/Reflex to Titer, Serum**

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, Serum**

<1:10 (Ref Interval: <1:10)

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

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

INTERPRETIVE INFORMATION: LGI1 Ab IgG w/Reflex to Titer, Serum  
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.

**Neuromyelitis Optica/AQP4-IgG, Serum**

<1:10 (Ref Interval: <1:10)

Aquaporin-4 Receptor Antibody, IgG is not detected. No further testing will be performed.

INTERPRETIVE INFORMATION: Neuromyelitis Optica/AQP4-IgG w/Rfx, Ser

Diagnosis of neuromyelitis optica (NMO) requires the presence of longitudinally extensive acute myelitis (lesions extending over 3 or more vertebral segments) and optic neuritis. Approximately 75 percent of patients with NMO express 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 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 Antibody IgG Screen by IFA**

<1:10 (Ref Interval: <1:10)

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

INTERPRETIVE INFORMATION: CV2.1 Antibody IgG Screen by IFA

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.

**AMPA Receptor Ab IgG Screen, Serum**

<1:10 (Ref Interval: <1:10)

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

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

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

<1:10 (Ref Interval: <1:10)

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

INTERPRETIVE INFORMATION: GABA Receptor Ab IgG Screen, Serum  
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.

**MOG Antibody IgG Screen, Serum**

<1:10 (Ref Interval: <1:10)

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

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

INTERPRETIVE INFORMATION: MOG Antibody IgG Screen, Serum

Myelin oligodendrocyte glycoprotein (MOG) antibody is found in a subset of patients with neuromyelitis optica spectrum disorders including optic neuritis and transverse myelitis, brainstem encephalitis and acute disseminated encephalomyelitis. Persistence of antibody positivity may be associated with a relapsing course. 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 CNS demyelinating disease or autoimmune encephalitis.

This indirect fluorescent antibody assay utilizes full-length MOG transfected cell lines for the detection and semi-quantification of MOG 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.

SOX1 Antibody, IgG by Immunoblot, Serum

Negative (Ref Interval: Negative)

INTERPRETIVE INFORMATION: SOX1 Antibody, IgG by Immunoblot, Serum

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.

Test developed and characteristics determined by ARUP Laboratories. See Compliance Statement D: aruplab.com/CS

DPPX Ab IgG CBA IFA Screen, Serum

<1:10 (Ref Interval: <1:10)

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

INTERPRETIVE INFORMATION: DPPX Ab IgG CBA IFA Screen, Serum

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.

P/Q-Type Calcium Channel Antibody

0.0 pmol/L (Ref Interval: 0.0-24.5)

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

INTERPRETIVE INFORMATION: P/Q-Type Calcium Channel Antibody

0.0 to 24.5 pmol/L ..... Negative  
24.6 to 45.6 pmol/L ..... Indeterminate  
45.7 pmol/L or greater..... Positive

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.

Voltage-Gated Potassium Channel Ab, Ser

26 pmol/L (Ref Interval: 0-31)

INTERPRETIVE INFORMATION: Voltage-Gated Potassium Channel (VGKC) Antibody, Serum

Negative ..... 31 pmol/L or less  
Indeterminate... 32 - 87 pmol/L  
Positive ..... 88 pmol/L or greater

Voltage-Gated Potassium Channel (VGKC) antibodies are associated with neuromuscular weakness as found in neuromyotonia (also known as Issacs syndrome) and Morvan syndrome. VGKC antibodies are also associated with paraneoplastic neurological syndromes and limbic encephalitis; however, VGKC antibody-associated limbic encephalitis may be associated with antibodies to leucine-rich, glioma-inactivated 1 protein (LGI1) or contactin-associated protein-2 (CASPR2) instead of potassium channel antigens. A substantial number of VGKC-antibody positive cases are negative for LGI1 and CASPR2 IgG autoantibodies, not all VGKC complex antigens are known. The clinical significance of this test can only be determined in conjunction with the patient's clinical history and related laboratory testing.

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.

Ganglionic Acetylcholine Receptor Ab

2.2 pmol/L (Ref Interval: 0.0-8.4)

REFERENCE INTERVAL: Ganglionic Acetylcholine Receptor Ab

Negative . . . . . 0.0-8.4 pmol/L  
Indeterminate. . . . . 8.5-11.6 pmol/L  
Positive . . . . . 11.7 pmol/L or greater

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.

Glutamic Acid Decarboxylase Antibody

<5.0 IU/mL (Ref Interval: 0.0-5.0)

INTERPRETIVE INFORMATION: Glutamic Acid Decarboxylase Antibody

A value greater than 5.0 IU/mL is considered positive for Glutamic Acid Decarboxylase Antibody (GAD Ab). This assay is intended for the semi-quantitative determination of the GAD Ab in human serum. Results should be interpreted within the context of clinical symptoms.

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

Unless otherwise indicated, testing performed at:

VERIFIED/REPORTED DATES

Procedure	Accession	Collected	Received	Verified/Reported
Neuronal Antibody (Amphiphysin)	21-331-104962	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Purkinje Cell/Neuronal Nuclear IgG Scrn	21-331-104962	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
N-methyl-D-Aspartate Receptor Ab, Serum	21-331-104962	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
CASPR2 Ab IgG Screen by IFA, Serum	21-331-104962	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
LG11 Ab IgG Screen by IFA, Serum	21-331-104962	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Neuromyelitis Optica/AQP4-IgG, Serum	21-331-104962	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
CV2.1 Antibody IgG Screen by IFA	21-331-104962	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
AMPA Receptor Ab IgG Screen, Serum	21-331-104962	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
GABA-B Receptor Ab IgG Screen, Serum	21-331-104962	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
MOG Antibody IgG Screen, Serum	21-331-104962	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
SOX1 Antibody, IgG by Immunoblot, Serum	21-331-104962	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
DPPX Ab IgG CBA IFA Screen, Serum	21-331-104962	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
P/Q-Type Calcium Channel Antibody	21-331-104962	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Voltage-Gated Potassium Channel Ab, Ser	21-331-104962	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Ganglionic Acetylcholine Receptor Ab	21-331-104962	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
Glutamic Acid Decarboxylase Antibody	21-331-104962	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  
Tracy I. George, MD, Laboratory Director

Patient: Patient, Example  
ARUP Accession: 21-331-104962  
Patient Identifiers: 01234567890ABCD, 012345  
Visit Number (FIN): 01234567890ABCD  
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