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

Physician: Doctor, Example

Patient: Patient, Example

DOB	12/31/1752
Sex:	Male
Patient Identifiers:	01234567890ABCD, 012345
Visit Number (FIN):	01234567890ABCD
Collection Date:	01/01/2017 12:34

Autoimmune Neurologic Disease Panel With Reflex, CSF

ARUP test code 3018967

NMDA Receptor Ab IgG CBA-IFA, CSF — **1:1** * (Ref Interval: < 1:1)

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

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.

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.

Paraneoplastic Abs (PCCA/ANNA) IgG, CSF — **PCCA Detected** * (Ref Interval: None Detected)

Antibodies detected, therefore IFA titer and Immunoblot testing to 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.

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

AMPA Receptor Ab IgG CBA-IFA Screen, CSF	**Detected** *	(Ref Interval: < 1:1)

AMPAR Antibody, IgG is detected. Titer results to follow.

INTERPRETIVE INFORMATION: AMPA Receptor Ab IgG CBA-IFA Screen, CSF
Alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionic 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.

GABA-BR Ab IgG CBA-IFA Screen, CSF	**Detected** *	(Ref Interval: < 1:1)

GABA-BR Antibody, IgG is detected. Titer results to follow.

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.

CASPR2 Ab IgG CBA-IFA Screen, CSF	**Detected** *	(Ref Interval: < 1:1)

CASPR2 Antibody, IgG is detected. Titer results to follow.

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.

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

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

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.

LGI1 Ab IgG CBA-IFA Screen, CSF	**Detected** *	**(Ref Interval: < 1:1)**

LGI1 Antibody, IgG is detected. Titer results to follow.

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.

CV2 Ab IgG CBA-IFA Screen, CSF	**Detected** *	**(Ref Interval: < 1:1)**

CV2 Antibody, IgG is detected. Titer results to follow. Additional charges apply.

INTERPRETIVE INFORMATION: CV2 Ab IgG CBA-IFA Screen, CSF

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

SOX1 Antibody, IgG by Immunoblot, CSF	**Positive** *	**(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	**Positive** *	**(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	**Detected** *	**(Ref Interval: < 1:1)**

DPPX Antibody, IgG is detected. Titer results to follow.

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.

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.

GABA-AR Ab IgG CBA-IFA Screen, CSF	**Detected** *	**(Ref Interval: < 1:1)**

GABA-AR Antibody, IgG is detected. Titer results to follow.

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

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.

IgLON5 Ab IgG CBA-IFA Screen, CSF	**Detected**	*	**(Ref Interval: < 1:1)**

IgLON5 Antibody, IgG is detected. Titer results to follow.

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	**Detected**	*	**(Ref Interval: < 1:1)**

mGluR1 Antibody, IgG is detected. Titer results to follow.

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.

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Ma2/Ta Antibody, IgG by Immunoblot, CSF	**Positive** *	**(Ref Interval: Negative)**

INTERPRETIVE INFORMATION: Ma2/Ta Antibody, IgG by Immunoblot, CSF
IgG antibodies to Ma2/Ta are associated with paraneoplastic neurologic syndromes with phenotypes most often including a combination of limbic encephalitis, diencephalic encephalitis, and brainstem encephalitis. Patients with anti-Ma2/Ta paraneoplastic neurologic syndromes should be thoroughly evaluated for cancer, including testicular cancer and adenocarcinoma, as neurologic symptoms often precede cancer diagnosis. Use of immune checkpoint inhibitors has also been associated with an increased risk of anti-Ma2 paraneoplastic neurologic disease. Consider sending testing in serum as well as CSF to improve diagnostic yield. Results (positive or negative) should be interpreted in the context of the patient's complete clinical picture, as false positives may occur and a negative result does not exclude the diagnosis of paraneoplastic neurologic disease.

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.

KLHL11 Ab IgG CBA-IFA Screen, CSF	**Detected** *	**(Ref Interval: < 1:1)**

KLHL11 Antibody, IgG is detected. Titer results to follow.

INTERPRETIVE INFORMATION: KLHL11 Antibody, IgG by CBA-IFA, CSF
IgG antibodies to KLHL11 are associated with paraneoplastic neurologic syndromes with phenotypes most often including a combination of brainstem and cerebellar encephalitis as well as sensorineural hearing loss. Patients with anti-KLHL11 syndromes should be thoroughly evaluated for cancer, including testicular cancer, as neurologic symptoms often precede cancer diagnosis. Consider sending testing in serum as well as CSF to improve diagnostic yield. Coexisting and clinically relevant antineural antibodies have been reported; consider ordering a phenotype-specific panel to assess for these. Results (positive or negative) should be interpreted in the context of the patient's complete clinical picture, as false positives may occur, and a negative result does not exclude the diagnosis of immune-mediated neurologic disease.

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.

Voltage-Gated Potassium Channel Ab, CSF	**10.0 pmol/L H**	**(Ref Interval: 0.0-1.1)**

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

Glutamic Acid Decarboxylase Antibody CSF	6.0 IU/mL	H	(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.

Alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionic Acid (AMPAR) Receptor Antibody Titer, IgG by CBA-IFA, CSF (Reflex of 3001257 AMPA CSF - Not orderable by clients)

ARUP test code 3001263

AMPA Receptor Ab IgG CBA-IFA Titer, CSF	1:1	*	(Ref Interval: < 1:1)

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.

Contactin-Associated Protein-2 Antibody Titer, IgG by CBA-IFA, CSF (Reflex of CASPR2GCSF Only - Not Orderable by Clients)

ARUP test code 3001989

CASPR2 Ab IgG CBA-IFA Titer, CSF	1:1	*	(Ref Interval: < 1:1)

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.

CV2 Antibody Titer, IgG by CBA-IFA, CSF (Reflex for 3017001 CV2 CSF - Not orderable by clients)

ARUP test code 3017002

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

CV2 Ab IgG CBA-IFA Titer, CSF	1:1	*	(Ref Interval: < 1:1)

INTERPRETIVE INFORMATION: CV2 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.

Dipeptidyl Aminopeptidase-Like Protein 6 (DPPX) Antibody Titer, IgG by CBA-IFA, CSF (Reflex of 3004512 DPPX CSF - Not orderable by clients)

ARUP test code 3004515

DPPX Ab IgG CBA-IFA Titer, CSF	1:1	*	(Ref Interval: < 1:1)

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.

Gamma-Aminobutyric Acid Receptor, Type A (GABA-AR) Antibody Titer, IgG by CBA-IFA, CSF (Reflex of GABA-A CSF - Not Orderable by Clients)

ARUP test code 3006006

GABA-AR Ab IgG CBA-IFA Titer, CSF	1:1	*	(Ref Interval: < 1:1)

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.

Gamma Aminobutyric Acid Receptor, Type B (GABA-BR) Antibody Titer, IgG by CBA-IFA, CSF (Reflex of 3001267 GABA CSF - Not orderable by clients)

ARUP test code 3001273

GABA-BR Ab IgG CBA-IFA Titer, CSF	1:1	*	(Ref Interval: < 1:1)

INTERPRETIVE INFORMATION: 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.

IgLON Family Member 5 (IgLON5) Antibody Titer, IgG by CBA-IFA, CSF (Reflex of IGLON5 CSF - Not Orderable by Clients)

ARUP test code 3006016

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

IgLON5 Ab IgG CBA-IFA Titer, CSF	1:1	*	(Ref Interval: < 1:1)

INTERPRETIVE INFORMATION: IgLON5 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.

Kelch-Like Protein 11 (KLHL11) Antibody Titer, IgG by CBA-IFA, CSF-Not Orderable by Clients

ARUP test code 3018731

KLHL11 Ab IgG CBA-IFA Titer, CSF	1:1	*	(Ref Interval: < 1:1)

INTERPRETIVE INFORMATION: KLHL11 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.

Leucine-Rich, Glioma-Inactivated Protein 1 Antibody Titer, IgG by CBA-IFA, CSF (Reflex for LGI1 IGG CSF Only - Not Orderable by Clients)

ARUP test code 3001994

LGI1 Ab IgG CBA-IFA Titer, CSF	1:1	*	(Ref Interval: < 1:1)

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.

Metabotropic Glutamate Receptor 1 (mGluR1) Antibody Titer, IgG by CBA-IFA, CSF (Reflex of MGLUR1 CSF - Not Orderable by Clients)

ARUP test code 3006042

mGluR1 Ab IgG CBA-IFA Titer, CSF	1:1	*	(Ref Interval: < 1:1)

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.

Purkinje Cell Antibody, Titer, CSF (Do NOT give this test code to clients - Panel Component ONLY. Refer to 2010841.)

ARUP test code 2010845

Purkinje Cell Antibody Titer IgG, CSF	1:20	*	(Ref Interval: < 1:1)

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

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.

Neuronal Nuclear Antibodies (Hu, Ri, Yo, Tr/DNER) IgG by Immunoblot, CSF

ARUP test code 3004527

Neuronal Nuclear Ab (Hu) IgG, IB, CSF	**Positive** *	**(Ref Interval: Negative)**

INTERPRETIVE INFORMATION: Neuronal Nuclear Ab (Hu) IgG, IB, CSF
This test detects IgG antineuronal antibodies to Hu, Ri, and Yo and 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-Hu (antineuronal nuclear antibody, type I) is associated with small cell lung cancer. Anti-Ri (antineuronal nuclear antibody, type II) is associated with neuroblastoma in children and with fallopian tube and breast cancer in adults. Anti-Yo (anti-Purkinje cell cytoplasmic antibody) is associated with ovarian and breast cancer. Anti-Tr(DNER) is associated with Hodgkin's lymphoma.

The presence of one or more 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.

Neuronal Nuclear Ab (Ri) IgG, IB, CSF	**Positive** *	**(Ref Interval: Negative)**

INTERPRETIVE INFORMATION: Neuronal Nuclear Ab (Ri) IgG, IB, 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.

Neuronal Nuclear Ab (Yo) IgG, IB, CSF	**Positive** *	**(Ref Interval: Negative)**

INTERPRETIVE INFORMATION: Neuronal Nuclear Ab (Yo) IgG, IB, 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.

Neuronal Nuclear Ab (TR/DNER) IgG, CSF	**Positive** *	**(Ref Interval: Negative)**

INTERPRETIVE INFORMATION: Neuronal Nuclear Ab (TR/DNER) IgG, CSF
This test was developed and its performance characteristics

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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.

Inositol 1,4,5-Trisphosphate Receptor Type 1 (ITPR1) Antibody, IgG by CBA-IFA With Reflex to Titer, CSF

ARUP test code 3006023

ITPR1 Ab IgG CBA-IFA Screen, CSF	**Detected** *	**(Ref Interval: < 1:1)**

ITPR1 Antibody, IgG is detected. Titer results to follow.

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.

Inositol 1,4,5-Trisphosphate Receptor Type 1 (ITPR1) Antibody Titer, IgG by CBA-IFA, CSF (Reflex of ITPR1 CSF - Not Orderable by Clients)

ARUP test code 3006026

ITPR1 Ab IgG CBA-IFA Titer, CSF	**1:1** *	**(Ref Interval: < 1:1)**

INTERPRETIVE INFORMATION: ITPR1 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.

VERIFIED/REPORTED DATES

Procedure	Accession	Collected	Received	Verified/Reported
NMDA Receptor Ab IgG CBA-IFA, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 11:29:50 AM	4/22/2025 12:13:00 PM
Purkinje Cell Antibody Titer IgG, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 12:12:50 PM	4/22/2025 12:14:00 PM
Paraneoplastic Abs (PCCA/ANNA) IgG, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 11:29:50 AM	4/22/2025 12:13:00 PM
AMPA Receptor Ab IgG CBA-IFA Screen, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 11:29:50 AM	4/22/2025 12:13:00 PM
AMPA Receptor Ab IgG CBA-IFA Titer, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 12:13:09 PM	4/22/2025 12:13:00 PM

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

GABA-BR Ab IgG CBA-IFA Screen, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 11:29:50 AM	4/22/2025 12:13:00 PM
GABA-BR Ab IgG CBA-IFA Titer, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 12:13:11 PM	4/22/2025 12:13:00 PM
CASPR2 Ab IgG CBA-IFA Screen, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 11:29:50 AM	4/22/2025 12:13:00 PM
CASPR2 Ab IgG CBA-IFA Titer, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 12:13:09 PM	4/22/2025 12:13:00 PM
LGI1 Ab IgG CBA-IFA Screen, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 11:29:50 AM	4/22/2025 12:13:00 PM
LGI1 Ab IgG CBA-IFA Titer, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 12:13:12 PM	4/22/2025 12:13:00 PM
CV2 Ab IgG CBA-IFA Screen, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 11:29:50 AM	4/22/2025 12:13:00 PM
CV2 Ab IgG CBA-IFA Titer, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 12:13:10 PM	4/22/2025 12:13:00 PM
SOX1 Antibody, IgG by Immunoblot, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 11:29:50 AM	4/22/2025 12:13:00 PM
Neuronal Nuclear Ab (Hu) IgG, IB, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 12:12:50 PM	4/22/2025 12:14:00 PM
Neuronal Nuclear Ab (Ri) IgG, IB, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 12:12:50 PM	4/22/2025 12:14:00 PM
Neuronal Nuclear Ab (Yo) IgG, IB, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 12:12:50 PM	4/22/2025 12:14:00 PM
Amphiphysin Antibody, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 11:29:50 AM	4/22/2025 12:13:00 PM
DPPX Ab IgG CBA-IFA Screen, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 11:29:50 AM	4/22/2025 12:13:00 PM
DPPX Ab IgG CBA-IFA Titer, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 12:13:10 PM	4/22/2025 12:13:00 PM
Neuronal Nuclear Ab (TR/DNER) IgG, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 12:12:50 PM	4/22/2025 12:14:00 PM
GABA-AR Ab IgG CBA-IFA Screen, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 11:29:50 AM	4/22/2025 12:13:00 PM
GABA-AR Ab IgG CBA-IFA Titer, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 12:13:11 PM	4/22/2025 12:13:00 PM
ITPR1 Ab IgG CBA-IFA Screen, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 12:13:13 PM	4/22/2025 12:14:00 PM
ITPR1 Ab IgG CBA-IFA Titer, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 12:14:27 PM	4/22/2025 12:14:00 PM
IgLON5 Ab IgG CBA-IFA Screen, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 11:29:50 AM	4/22/2025 12:13:00 PM
IgLON5 Ab IgG CBA-IFA Titer, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 12:13:11 PM	4/22/2025 12:13:00 PM
mGluR1 Ab IgG CBA-IFA Screen, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 11:29:50 AM	4/22/2025 12:13:00 PM
mGluR1 Ab IgG CBA-IFA Titer, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 12:13:13 PM	4/22/2025 12:13:00 PM
Ma2/Ta Antibody, IgG by Immunoblot, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 11:29:50 AM	4/22/2025 12:13:00 PM
KLHL11 Ab IgG CBA-IFA Screen, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 11:29:50 AM	4/22/2025 12:13:00 PM
KLHL11 Ab IgG CBA-IFA Titer, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 12:13:12 PM	4/22/2025 12:13:00 PM
Voltage-Gated Potassium Channel Ab, CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 11:29:50 AM	4/22/2025 12:13:00 PM
Glutamic Acid Decarboxylase Antibody CSF	25-112-107076	4/22/2025 10:57:00 AM	4/22/2025 11:29:50 AM	4/22/2025 12:13:00 PM

END OF CHART

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