

**Specimen Collected: 2/10/2025 07:29 MST**

**Autoimmune Neurologic Disease Rfx | Received: 2/10/2025 07:29 MST Report/Verified: 2/10/2025 07:32 MST**

Procedure	Result	Units	Reference Interval
NMDA Receptor Ab IgG CBA-IFA, CSF	<b>1:10 * f1 i1</b>		[< 1:1]
Paraneoplastic Abs (PCCA/ANNA) IgG, CSF	<b>PCCA Detected * f2 i2</b>		[None Detected]
AMPA Receptor Ab IgG CBA-IFA Screen, CSF	<b>Detected * t1 i3</b>		[< 1:1]
GABA-BR Ab IgG CBA-IFA Screen, CSF	<b>Detected * t2 i4</b>		[< 1:1]
CASPR2 Ab IgG CBA-IFA Screen, CSF	<b>Detected * t3 i5</b>		[< 1:1]
LGI1 Ab IgG CBA-IFA Screen, CSF	<b>Detected * t4 i6</b>		[< 1:1]
CV2 Ab IgG CBA-IFA Screen, CSF	<b>Detected * t5 i7</b>		[< 1:1]
SOX1 Antibody, IgG by Immunoblot, CSF	<b>Low Positive * f3 i8</b>		[Negative]
Amphiphysin Antibody, CSF	<b>High Positive * i9</b>		[Negative]
DPPX Ab IgG CBA-IFA Screen, CSF	<b>Detected * t6 i10</b>		[< 1:1]
GABA-AR Ab IgG CBA-IFA Screen, CSF	<b>Detected * t7 i11</b>		[< 1:1]
IgLON5 Ab IgG CBA-IFA Screen, CSF	<b>Detected * t8 i12</b>		[< 1:1]
mGluR1 Ab IgG CBA-IFA Screen, CSF	<b>Detected * t9 i13</b>		[< 1:1]
Ma2/Ta Antibody, IgG by Immunoblot, CSF	<b>Positive * i14</b>		[Negative]
KLHL11 Ab IgG CBA-IFA Screen, CSF	<b>Detected * t10 i15</b>		[< 1:1]
Voltage-Gated Potassium Channel Ab, CSF	<b>5.0 # i16</b>	pmol/L	[0.0-1.1]
Glutamic Acid Decarboxylase Antibody CSF	<b>10.0 # i17</b>	IU/mL	[0.0-5.0]

**Neuronal Nuclear Abs IgG, IB, CSF | Received: 2/10/2025 07:29 MST Report/Verified: 2/10/2025 07:32 MST**

Procedure	Result	Units	Reference Interval
Neuronal Nuclear Ab (Hu) IgG, IB, CSF	<b>Positive * i18</b>		[Negative]
Neuronal Nuclear Ab (Ri) IgG, IB, CSF	<b>High Positive * i19</b>		[Negative]
Neuronal Nuclear Ab (Yo) IgG, IB, CSF	<b>Positive * i20</b>		[Negative]
Neuronal Nuclear Ab (TR/DNER) IgG, CSF	<b>Low Positive * f4 i21</b>		[Negative]

**Purkinje Cell Antibody Titer, CSF | Received: 2/10/2025 07:29 MST Report/Verified: 2/10/2025 07:32 MST**

Procedure	Result	Units	Reference Interval
Purkinje Cell Antibody Titer IgG, CSF	<b>1:80 * i22</b>		[< 1:1]

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*Unless otherwise indicated, testing performed at:*

**ARUP Laboratories**

500 Chipeta Way, Salt Lake City, UT 84108

Laboratory Director: Jonathan R. Genzen, MD, PhD

**ARUP Accession:** 25-041-900018

**Report Request ID:** 20291774

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AMPA Rptr Ab IgG Titer by CBA-IFA, CSF	Received: 2/10/2025 07:29 MST	Report/Verified: 2/10/2025 07:32 MST
Procedure	Result	Units
AMPA Receptor Ab IgG CBA-IFA Titer,CSF	1:40 * <sup>i23</sup>	Reference Interval [< 1:1]
CASPR2 Ab IgG Titer by CBA-IFA, CSF	Received: 2/10/2025 07:29 MST	Report/Verified: 2/10/2025 07:32 MST
Procedure	Result	Units
CASPR2 Ab IgG CBA-IFA Titer,CSF	1:20 * <sup>i24</sup>	Reference Interval [< 1:1]
CV2 Ab IgG Titer by CBA-IFA, CSF	Received: 2/10/2025 07:29 MST	Report/Verified: 2/10/2025 07:32 MST
Procedure	Result	Units
CV2 Ab IgG CBA-IFA Titer,CSF	1:5 * <sup>i25</sup>	Reference Interval [< 1:1]
DPPX Ab IgG Titer by CBA-IFA, CSF	Received: 2/10/2025 07:29 MST	Report/Verified: 2/10/2025 07:32 MST
Procedure	Result	Units
DPPX Ab IgG CBA-IFA Titer,CSF	1:1 * <sup>i26</sup>	Reference Interval [< 1:1]
GABA-A Receptor IgG CBA-IFA Titer, CSF	Received: 2/10/2025 07:29 MST	Report/Verified: 2/10/2025 07:32 MST
Procedure	Result	Units
GABA-AR Ab IgG CBA-IFA Titer,CSF	1:1280 * <sup>i27</sup>	Reference Interval [< 1:1]
GABA-B Rptr Ab IgG Titer by CBA-IFA, CSF	Received: 2/10/2025 07:29 MST	Report/Verified: 2/10/2025 07:32 MST
Procedure	Result	Units
GABA-BR Ab IgG CBA-IFA Titer,CSF	1:10 * <sup>i28</sup>	Reference Interval [< 1:1]
IgLON5 Ab IgG CBA-IFA Titer, CSF	Received: 2/10/2025 07:29 MST	Report/Verified: 2/10/2025 07:32 MST
Procedure	Result	Units
IgLON5 Ab IgG CBA-IFA Titer,CSF	1:80 * <sup>i29</sup>	Reference Interval [< 1:1]
KLHL11 Ab IgG CBA-IFA Titer, CSF	Received: 2/10/2025 07:29 MST	Report/Verified: 2/10/2025 07:33 MST
Procedure	Result	Units
KLHL11 Ab IgG CBA-IFA Titer,CSF	1:640 * <sup>i30</sup>	Reference Interval [< 1:1]
LGI1 Ab IgG Titer by CBA-IFA, CSF	Received: 2/10/2025 07:29 MST	Report/Verified: 2/10/2025 07:33 MST
Procedure	Result	Units
LGI1 Ab IgG CBA-IFA Titer,CSF	1:5 * <sup>i31</sup>	Reference Interval [< 1:1]
mGluR1 Ab IgG CBA-IFA Titer, CSF	Received: 2/10/2025 07:29 MST	Report/Verified: 2/10/2025 07:33 MST
Procedure	Result	Units
mGluR1 Ab IgG CBA-IFA Titer,CSF	1:160 * <sup>i32</sup>	Reference Interval [< 1:1]
ITPR1 Ab IgG CBA-IFA, CSF, with Rflx	Received: 2/10/2025 07:29 MST	Report/Verified: 2/10/2025 07:33 MST
Procedure	Result	Units
ITPR1 Ab IgG CBA-IFA Screen,CSF	Detected * <sup>t11 i33</sup>	Reference Interval [< 1:1]

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ITPR1 Ab IgG CBA-IFA Titer, CSF | Received: 2/10/2025 07:29 MST Report/Verified: 2/10/2025 07:34 MST

Procedure	Result	Units	Reference Interval
ITPR1 Ab IgG CBA-IFA Titer, CSF	1:80 * <sup>134</sup>		[< 1:1]

**Interpretive Text**

- t1: 2/10/2025 07:29 MST (AMPA Receptor Ab IgG CBA-IFA Screen, CSF)  
AMPA Antibody, IgG is detected. Titer results to follow.
- t2: 2/10/2025 07:29 MST (GABA-BR Ab IgG CBA-IFA Screen, CSF)  
GABA-BR Antibody, IgG is detected. Titer results to follow.
- t3: 2/10/2025 07:29 MST (CASPR2 Ab IgG CBA-IFA Screen, CSF)  
CASPR2 Antibody, IgG is detected. Titer results to follow.
- t4: 2/10/2025 07:29 MST (LGI1 Ab IgG CBA-IFA Screen, CSF)  
LGI1 Antibody, IgG is detected. Titer results to follow.
- t5: 2/10/2025 07:29 MST (CV2 Ab IgG CBA-IFA Screen, CSF)  
CV2 Antibody, IgG is detected. Titer results to follow. Additional charges apply.
- t6: 2/10/2025 07:29 MST (DPPX Ab IgG CBA-IFA Screen, CSF)  
DPPX Antibody, IgG is detected. Titer results to follow.
- t7: 2/10/2025 07:29 MST (GABA-AR Ab IgG CBA-IFA Screen, CSF)  
GABA-AR Antibody, IgG is detected. Titer results to follow.
- t8: 2/10/2025 07:29 MST (IgLON5 Ab IgG CBA-IFA Screen, CSF)  
IgLON5 Antibody, IgG is detected. Titer results to follow.
- t9: 2/10/2025 07:29 MST (mGluR1 Ab IgG CBA-IFA Screen, CSF)  
mGluR1 Antibody, IgG is detected. Titer results to follow.
- t10: 2/10/2025 07:29 MST (KLHL11 Ab IgG CBA-IFA Screen, CSF)  
KLHL11 Antibody, IgG is detected. Titer results to follow.
- t11: 2/10/2025 07:29 MST (ITPR1 Ab IgG CBA-IFA Screen, CSF)  
ITPR1 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.  
  
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.
- f3: SOX1 Antibody, IgG by Immunoblot, CSF  
  
Low positive reactivity to SOX1 detected. Strong clinical correlation is recommended.
- f4: Neuronal Nuclear Ab (TR/DNER) IgG, CSF  
  
Low positive reactivity to Tr(DNER) detected. Strong clinical correlation is recommended.

**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

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**Test Information**

i1: NMDA Receptor Ab IgG CBA-IFA, CSF  
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: 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-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. 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.

i4: 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

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**Test Information**

i4: GABA-BR Ab IgG CBA-IFA Screen, CSF  
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.

i5: 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.

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.

i6: 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.

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**Test Information**

i6: LGI1 Ab IgG CBA-IFA Screen, CSF  
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.

i7: CV2 Ab IgG CBA-IFA Screen, CSF  
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.

i8: SOX1 Antibody, IgG by Immunoblot, CSF  
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.

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i9: Amphiphysin Antibody, CSF  
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.

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**Test Information**

i9: Amphiphysin Antibody, 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.

i10: 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.

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.

i11: 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.

i12: IgLON5 Ab IgG CBA-IFA Screen, CSF

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

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**Test Information**

i12: IgLON5 Ab IgG CBA-IFA Screen, CSF

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.

i13: 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.

i14: Ma2/Ta Antibody, IgG by Immunoblot, CSF

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.

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**Test Information**

i14: Ma2/Ta Antibody, IgG by Immunoblot, CSF

Administration. This test was performed in a CLIA-certified laboratory and is intended for clinical purposes.

i15: KLHL11 Ab IgG CBA-IFA Screen, CSF

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.

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i16: Voltage-Gated Potassium Channel Ab, CSF

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.

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i17: Glutamic Acid Decarboxylase Antibody CSF

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).

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**Test Information**

i17: Glutamic Acid Decarboxylase Antibody 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.

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i18: Neuronal Nuclear Ab (Hu) IgG, IB, CSF

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.

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i19: Neuronal Nuclear Ab (Ri) IgG, IB, CSF

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.

i20: Neuronal Nuclear Ab (Yo) IgG, IB, CSF

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

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**Unless otherwise indicated, testing performed at:**

**ARUP Laboratories**

500 Chipeta Way, Salt Lake City, UT 84108

Laboratory Director: Jonathan R. Genzen, MD, PhD

**ARUP Accession:** 25-041-900018

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**Test Information**

i21: Neuronal Nuclear Ab (TR/DNER) IgG, CSF

INTERPRETIVE INFORMATION: Neuronal Nuclear Ab (TR/DNER)  
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.

i22: 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.

i23: 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.

i24: 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.

i25: CV2 Ab IgG CBA-IFA Titer, CSF

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

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i26: DPPX Ab IgG CBA-IFA Titer, CSF

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

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i27: GABA-AR Ab IgG CBA-IFA Titer, CSF

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

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**Test Information**

i27: GABA-AR Ab IgG CBA-IFA Titer, CSF

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i28: GABA-BR Ab IgG CBA-IFA Titer, CSF

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.

i29: IgLON5 Ab IgG CBA-IFA Titer, CSF

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.

i30: KLHL11 Ab IgG CBA-IFA Titer, CSF

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.

i31: 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.

i32: 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.

i33: ITPR1 Ab IgG CBA-IFA Screen, CSF

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

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**Test Information**

i33: ITPR1 Ab IgG CBA-IFA Screen, CSF  
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.

i34: ITPR1 Ab IgG CBA-IFA Titer, CSF  
INTERPRETIVE INFORMATION: ITPR1 Ab IgG CBA-IFA Titer, CSF

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