

500 Chipeta Way, Salt Lake City, Utah 84108-1221

phone: 801-583-2787, toll free: 800-522-2787

Jonathan R. Genzen, MD, PhD, Chief Medical Officer

Patient Age/Sex:

Unknown

**Specimen Collected: 16-Jun-23 15:59****Neuronal Nuclear Abs IgG, IB, CSF | Received: 16-Jun-23 15:59 Report/Verified: 16-Jun-23 16:05**

Procedure	Result	Units	Reference Interval
Neuronal Nuclear Ab (Hu) IgG, IB, CSF	High Positive * i1		[Negative]
Neuronal Nuclear Ab (Ri) IgG, IB, CSF	Positive * i2		[Negative]
Neuronal Nuclear Ab (Yo) IgG, IB, CSF	Positive * i3		[Negative]
Neuronal Nuclear Ab (TR/DNER) IgG, CSF	High Positive * i4		[Negative]

**Paraneoplastic Reflexive Panel, CSF | Received: 16-Jun-23 15:59 Report/Verified: 16-Jun-23 16:05**

Procedure	Result	Units	Reference Interval
Paraneoplastic Abs (PCCA/ANNA) IgG, CSF	PCCA Detected * f1 i5		[None Detected]
CV2.1 Ab IgG CBA-IFA Screen, CSF	Detected * t1 i6		[< 1:1]
SOX1 Antibody, IgG by Immunoblot, CSF	Positive * i7		[Negative]
Amphiphysin Antibody, CSF	High Positive * i8		[Negative]

**Purkinje Cell Antibody Titer, CSF | Received: 16-Jun-23 15:59 Report/Verified: 16-Jun-23 16:05**

Procedure	Result	Units	Reference Interval
Purkinje Cell Antibody Titer IgG, CSF	1:80 * i9		[< 1:1]

**CV2.1 Ab IgG Titer by CBA-IFA, CSF | Received: 16-Jun-23 15:59 Report/Verified: 16-Jun-23 16:05**

Procedure	Result	Units	Reference Interval
CV2.1 Ab IgG CBA-IFA Titer, CSF	1:20 * i10		[<1.1]

**Interpretive Text**

t1: 16-Jun-23 15:59 (CV2.1 Ab IgG CBA-IFA Screen, CSF)  
CV2.1 Antibody, IgG is detected. Titer results to follow. Additional charges apply.

**Result Footnote**

f1: Paraneoplastic Abs (PCCA/ANNA) IgG, CSF

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

**Test Information**

i1: 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

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

**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:** 23-167-900162

**Report Request ID:** 17763851

**Printed:** 19-Jun-23 12:10

Page 1 of 4

**Test Information**

i1: Neuronal Nuclear Ab (Hu) IgG, IB, CSF  
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.

i2: 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.

i3: Neuronal Nuclear Ab (Yo) IgG, IB, CSF  
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.

i4: 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.

i5: 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.

i6: CV2.1 Ab IgG CBA-IFA Screen, CSF  
INTERPRETIVE INFORMATION: CV2.1 Ab IgG CBA-IFA Screen, CSF

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

**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:** 23-167-900162

**Report Request ID:** 17763851

**Printed:** 19-Jun-23 12:10

Page 2 of 4

**Test Information**

i6: CV2.1 Ab IgG CBA-IFA 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. 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 CV2.1 transfected cell lines for the detection and semiquantification of the CV2.1 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: 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.

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: 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.

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.

i9: 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

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

**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:** 23-167-900162

**Report Request ID:** 17763851

**Printed:** 19-Jun-23 12:10

Page 3 of 4

**Test Information**

i9: Purkinje Cell Antibody Titer IgG, CSF  
Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

i10: CV2.1 Ab IgG CBA-IFA Titer, CSF  
INTERPRETIVE INFORMATION: CV2.1 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.

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

***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:** 23-167-900162

**Report Request ID:** 17763851

**Printed:** 19-Jun-23 12:10

Page 4 of 4