Motor and Sensory Neuropathy Evaluation with Immunofixation Electrophoresis and Reflex to Titer and Neuronal Immunoblot

Patient: [redacted] DOB: [redacted] Age: 75 Sex: F **Patient Identifiers:** [redacted] **Visit Number (FIN):** [redacted]	Client: [redacted] Physician: [redacted]	ARUP Test Code: 2007967 Collection Date: 02/06/2024 Received in lab: 02/09/2024 Completion Date: 02/12/2024

MAG Antibody, IgM Elisa	<1000 TU	(Ref Interval: 0-999)

INTERPRETIVE INFORMATION: MAG Antibody, IgM ELISA

An elevated IgM antibody concentration greater than 999 TU against myelin-associated glycoprotein (MAG) suggests active demyelination in peripheral neuropathy. A normal concentration (less than 999 TU) generally rules out an anti-MAG antibody-associated peripheral neuropathy.

TU=Titer Units

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.

SGPG Antibody, IgM	0.15 IV	(Ref Interval: 0.00-0.99)

INTERPRETIVE INFORMATION: SGPG Antibody, IgM

The majority of sulfate-3-glucuronyl paragloboside (SGPG) IgM-positive
sera will show reactivity against MAG. Patients who are SGPG IgM positive and MAG IgM negative may have multi-focal motor neuropathy
with conduction block.

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.

Asialo-GM1 Antibodies, IgG/IgM	14 IV	(Ref Interval: 0-50)
GM1 Antibodies, IgG/IgM	8 IV	(Ref Interval: 0-50)
GD1a Antibodies, IgG/IgM	6 IV	(Ref Interval: 0-50)
GD1b Antibodies, IgG/IgM	6 IV	(Ref Interval: 0-50)
GQ1b Antibodies, IgG/IgM	6 IV	(Ref Interval: 0-50)

INTERPRETIVE INFORMATION: Ganglioside (Asialo-GM1, GM1, GM2, GD1a, GD1b, and GQ1b) Antibodies, IgG/IgM

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

Chart continues on following page(s)

Patient: [redacted] | **Date of Birth:** [redacted] | **Sex:** F | **Physician:** [redacted]
Patient Identifiers: [redacted] | **Visit Number (FIN):** [redacted]

29 IV or less: Negative
30-50 IV: Equivocal
51-100 IV: Positive
101 IV or greater: Strong Positive

Ganglioside antibodies are associated with diverse peripheral neuropathies. Elevated antibody levels to ganglioside-monosialic acid (GM1), and the neutral glycolipid, asialo GM1 are associated with motor or sensorimotor neuropathies, particularly multifocal motor neuropathy. Anti-GM1 may occur as IgM (polyclonal or monoclonal) or IgG antibodies. These antibodies may also be found in patients with diverse connective tissue diseases as well as normal individuals. GD1a antibodies are associated with different variants of Guillain-Barre syndrome (GBS) particularly acute motor axonal neuropathy while GD1b antibodies are predominantly found in sensory ataxic neuropathy syndrome. Anti-GQ1b antibodies are seen in more than 80 percent of patients with Miller-Fisher syndrome and may be elevated in GBS patients with ophthalmoplegia. The role of isolated anti-GM2 antibodies is unknown. These tests by themselves are not diagnostic and should be used in conjunction with other clinical parameters to confirm disease.

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.

Immunoglobulin G	**557 mg/dL L**	(Ref Interval: 768-1632)
Immunoglobulin A	157 mg/dL	(Ref Interval: 68-408)
Immunoglobulin M	65 mg/dL	(Ref Interval: 35-263)
Total Protein, Serum	**6.2 g/dL L**	(Ref Interval: 6.3-8.2)
Albumin	3.83 g/dL	(Ref Interval: 3.75-5.01)
Alpha 1 Globulin	0.27 g/dL	(Ref Interval: 0.19-0.46)
Alpha 2 Globulin	0.75 g/dL	(Ref Interval: 0.48-1.05)
Beta Globulin	0.78 g/dL	(Ref Interval: 0.48-1.10)
Gamma	**0.58 g/dL L**	(Ref Interval: 0.62-1.51)
Monoclonal Protein	Not Applicable g/dL	
Immunofixation	IFE Done	
SPEP/IFE Interpretation	See Note Hypogammaglobulinemia. A Kappa/Lambda Quantitative Free Light Chain (0055167) on a serum sample may also be of diagnostic value. IFE gel shows a normal pattern; no monoclonal proteins seen.	

Chart continues on following page(s)

Patient: [redacted] | **Date of Birth:** [redacted] | **Sex:** F | **Physician:** [redacted]
Patient Identifiers: [redacted] | **Visit Number (FIN):** [redacted]

Only the Motor and Sensory Neuropathy Evaluation with Immunofixation Electrophoresis results are included in this enhanced report. If the reflex test is added, those results can be accessed via a patient report or electronic medical record system after reflex testing is completed. Reflex testing occurs when neuronal nuclear IgG (purkinje cell) IFA results are positive. A titer is added, and if that titer is positive, neuronal nuclear IgG (Hu, Ri, and Yo) testing is added.

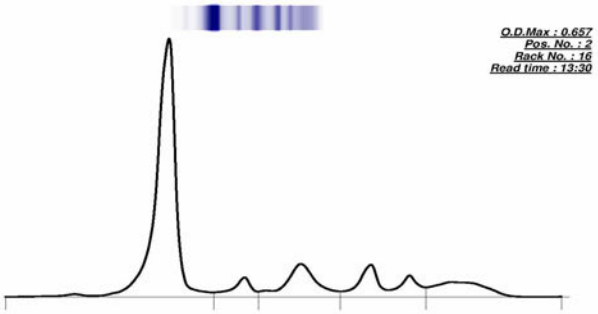
Note: Electrophoresis image and Immunofixation (IFE) Gel image, as applicable, continue on following page.

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

Chart continues on following page(s)

Patient: [redacted] | **Date of Birth:** [redacted] | **Sex:** F | **Physician:** [redacted]
Patient Identifiers: [redacted] | **Visit Number (FIN):** [redacted]

Electrophoresis Image



Immunofixation (IFE) Gel Image

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

END OF CHART