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

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Patient: [redacted] DOB: [redacted] Age: 56 Gender: [redacted] **Patient Identifiers:** [redacted] **Visit Number (FIN):** [redacted]	Client: [redacted] Physician: [redacted]	ARUP Test Code: 2007967 Collection Date: 01/18/2020 Received in lab: 01/19/2020 Completion Date: 01/22/2020

MAG Antibody, IgM Elisa	0 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

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

SGPG Antibody, IgM	0.02 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.

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

Purkinje Cell/Neuronal Nuclear IgG Scrn	None Detected		(Ref Interval: None Detected)

ANNA-1, ANNA-2 or PCA-1 antibodies not detected confirmatory testing for Hu (ANNA-1), Ri (ANNA-2) or Yo (PCA-1) IgG antibodies will not be performed.

INTERPRETIVE INFORMATION: Purkinje Cell/Neuronal Nuclear IgG Scrn

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Asialo-GM1 Antibodies, IgG/IgM	23 IV		(Ref Interval: 0-50)
GM1 Antibodies, IgG/IgM	**58 IV**	**H**	(Ref Interval: 0-50)
GD1a Antibodies, IgG/IgM	**70 IV**	**H**	(Ref Interval: 0-50)
GD1b Antibodies, IgG/IgM	**77 IV**	**H**	(Ref Interval: 0-50)
GQ1b Antibodies, IgG/IgM	8 IV		(Ref Interval: 0-50)

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

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

Ganglioside antibodes are associated with diverse peripheral neuropathies. Elevated antibody levels to ganglioside-monosialic acid (GM1), and the neutral glycolipid,

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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.

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Immunoglobulin G	**2660 mg/dL**	**H**	(Ref Interval: 768-1632)
	REFERENCE INTERVAL: Immunoglobulin G Access complete set of age- and/or gender-specific reference intervals for this test in the ARUP Laboratory Test Directory (aruplab.com).		
Immunoglobulin A	327 mg/dL		(Ref Interval: 68-408)
	REFERENCE INTERVAL: Immunoglobulin A Access complete set of age- and/or gender-specific reference intervals for this test in the ARUP Laboratory Test Directory (aruplab.com).		
Immunoglobulin M	67 mg/dL		(Ref Interval: 35-263)
	REFERENCE INTERVAL: Immunoglobulin M Access complete set of age- and/or gender-specific reference intervals for this test in the ARUP Laboratory Test Directory (aruplab.com).		
Total Protein, Serum	7.4 g/dL		(Ref Interval: 6.3-8.2)
Albumin	**2.86 g/dL**	**L**	(Ref Interval: 3.75-5.01)
Alpha 1 Globulin	0.33 g/dL		(Ref Interval: 0.19-0.46)
Alpha 2 Globulin	0.75 g/dL		(Ref Interval: 0.48-1.05)
Beta Globulin	0.90 g/dL		(Ref Interval: 0.48-1.10)
Gamma	**2.55 g/dL**	**H**	(Ref Interval: 0.62-1.51)
Immunofixation	IFE Done		
SPEP/IFE Interpretation	See Note Decreased albumin region. Polyclonal increase in the gamma region. IFE shows a polyclonal increase in IgG no monoclonal proteins seen.		

Patient: [redacted] | **Date of Birth:** [redacted] | **Gender:** 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.

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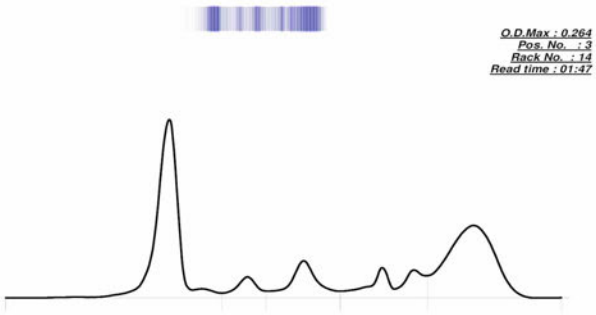
Patient: [redacted] | **Date of Birth:** [redacted] | **Gender:** F | **Physician:** [redacted]
Patient Identifiers: [redacted] | **Visit Number (FIN):** [redacted]

Electrophoresis Image



Immunofixation (IFE) Gel Image

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