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PATIENT REPORT

Patient Age/Sex: Unknown

Specimen Collected: 2/6/2025 12:49 MST

Extended Myositis Panel 2 | **Received: 2/6/2025 14:14 MST** | **Report/Verified: 2/6/2025 16:15 MST**

Procedure	Result	Units	Reference Interval
SSA-52 (Ro52) (ENA) Antibody,IgG	50 H i1	AU/mL	[0-40]
SSA-60 (Ro60) (ENA) Antibody,IgG	50 H i2	AU/mL	[0-40]
Smith/RNP (ENA) Ab,IgG	40 H i3	Units	[0-19]
Jo-1 (Histidyl-tRNA Synthetase) Ab,IgG	50 H i4	AU/mL	[0-40]
PL-12 (alanyl-tRNA synthetase) Antibody	Positive *		[Negative]
PL-7 (threonyl-tRNA synthetase) Antibody	Positive *		[Negative]
EJ (glycyl-tRNA synthetase) Antibody	Positive *		[Negative]
OJ (isoleucyl-tRNA synthetase) Antibody	Positive *		[Negative]
SRP (Signal Recognition Particle) Ab	Positive *		[Negative]
Ku Antibody	Positive *		[Negative]
PM/Scl 100 Antibody,IgG	Positive * i5		[Negative]
Fibrillarin (U3 RNP) Ab,IgG	Positive * i6		[Negative]
Mi-2 (nuclear helicase protein) Antibody	Positive *		[Negative]
P155/140 Antibody	Positive *		[Negative]
TIF-1 gamma (155 kDa) Ab	Positive *		[Negative]
SAE1 (SUMO activating enzyme) Ab	Positive *		[Negative]
MDA5 (CADM-140) Ab	Positive *		[Negative]
NXP2 (Nuclear matrix protein-2) Ab	Positive *		[Negative]
Myositis Panel Interpretive Data	See Note i7		
Antinuclear Antibody (ANA),HEp-2,IgG	Detected *		[<1:80]
ANA Interpretive Comment	See Note t1 i8		
Ha (tyrosyl-tRNA synthetase) Ab	Positive * t2		[Negative]
Ks (asparaginyl-tRNA synthetase) Ab	Positive * t3		[Negative]
Zo (phenylalanyl-tRNA synthetase) Ab	Positive * t4		[Negative]
HMGCR Antibody Screen	Positive * f1		[Positive]

Antinuclear Ab, Dual Pattern | **Received: 2/6/2025 14:14 MST** | **Report/Verified: 2/6/2025 16:15 MST**

Procedure	Result	Units	Reference Interval
ANA Titer	1:160 *		

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

Antinuclear Ab, Dual Pattern	**Received: 2/6/2025 14:14 MST**		**Report/Verified: 2/6/2025 16:15 MST**
Procedure	**Result**	**Units**	**Reference Interval**
ANA Titer 2	1:160 *		
ANA Pattern	Speckled *		
ANA Pattern 2	Centromere *		

Cytoplasmic Pattern	**Received: 2/6/2025 14:14 MST**		**Report/Verified: 2/6/2025 16:15 MST**
Procedure	**Result**	**Units**	**Reference Interval**
Cytoplasmic Titer	1:160 *		
Cytoplasm Pattern	Speckled *		

HMGCR Antibody, IgG	**Received: 2/6/2025 14:14 MST**		**Report/Verified: 2/6/2025 16:17 MST**
Procedure	**Result**	**Units**	**Reference Interval**
HMGCR Antibody,IgG	20 H i9	Units	[0-19]

Interpretive Text

t1: 2/6/2025 12:49 MST (ANA Interpretive Comment)

Speckled Pattern
Clinical associations: SLE, SSc, SjS, DM, PM, MCTD, UCTD. May also be found in healthy individuals
Main autoantibodies: Anti-SSA-52 (Ro52), anti-SSA-60 (Ro60), anti-SS-B/LA, anti-Topo-1 (anti-Scl-70), Smith, anti-U1-RNP, anti-U2-RNP, anti-Mi-2, anti-p155/140 (TIF1g), anti-Ku, anti-RNA polymerase, anti-DFS70/LEDGF-P75

Centromere Pattern
Clinical associations: SSc, PBC
Main autoantibodies: Anti-centromere A/B(c)

Cytoplasmic Speckled pattern (includes dense fine speckled and fine speckled patterns)
Clinical Associations: anti-synthetase (ARS), SLE, necrotizing myopathy, dermatomyositis
Main autoantibodies: EJ, Jo-1, OJ, PL-7, PL-12, MDA5, ribosomal p, SRP

List of Abbreviations
Antisynthetase syndrome (ARS), chronic active hepatitis (CAH), inflammatory myopathies (IM) [dermatomyositis (DM), polymyositis (PM), necrotizing autoimmune myopathy (NAM)], interstitial lung disease (ILD), juvenile idiopathic arthritis (JIA), mixed connective tissue disease (MCTD), primary biliary cholangitis (PBC), rheumatoid arthritis (RA), systemic autoimmune rheumatic diseases (SARD), Sjogren syndrome (SjS), systemic lupus erythematosus (SLE), systemic sclerosis (SSc), undifferentiated connective tissue disease (UCTD).

t2: 2/6/2025 12:49 MST (Ha (tyrosyl-tRNA synthetase) Ab)

Ha positive by line immunoassay. Band corresponding to 65 KDa observed by immunoprecipitation. Profile consistent with Ha antibody positivity.

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

Interpretive Text

t3: 2/6/2025 12:49 MST (Ks (asparaginyl-tRNA synthetase) Ab)

Ks positive by line immunoassay. Band corresponding to 65 kDa observed by immunoprecipitation. Profile consistent with Ks antibody positivity.

t4: 2/6/2025 12:49 MST (Zo (phenylalanyl-tRNA synthetase) Ab)

Zo positive by line immunoassay. Bands corresponding to 68 and 58 KDa observed by immunoprecipitation. Profile consistent with Zo antibody positivity.

Result Footnote

f1: HMGCR Antibody Screen

HMGCR Antibody, IgG is Positive. Additional testing to follow.

Test Information

i1: SSA-52 (Ro52) (ENA) Antibody, IgG

INTERPRETIVE INFORMATION: SSA-52 (Ro52) (ENA) Antibody, IgG

29 AU/mL or Less ..... Negative
30 - 40 AU/mL ..... Equivocal
41 AU/mL or Greater ..... Positive

SSA-52 (Ro52) and/or SSA-60 (Ro60) antibodies are associated with a diagnosis of Sjogren syndrome, systemic lupus erythematosus (SLE), and systemic sclerosis. SSA-52 antibody overlaps significantly with the major SSc-related antibodies. SSA-52 (Ro52) antibody occurs frequently in patients with inflammatory myopathies, often in the presence of interstitial lung disease.

i2: SSA-60 (Ro60) (ENA) Antibody, IgG

REFERENCE INTERVAL: SSA-60 (Ro60) (ENA) Antibody, IgG

29 AU/mL or Less ..... Negative
30 - 40 AU/mL ..... Equivocal
41 AU/mL or Greater ..... Positive

i3: Smith/RNP (ENA) Ab, IgG

INTERPRETIVE INFORMATION: Smith/RNP (ENA) Antibody, IgG

19 Units or Less ..... Negative
20 to 39 Units ..... Weak Positive
40 to 80 Units ..... Moderate Positive
81 Units or greater ..... Strong Positive

Smith/RNP antibodies are frequently seen in patients with mixed connective tissue disease (MCTD) and are also associated with other systemic autoimmune rheumatic diseases (SARDs) such as systemic lupus erythematosus (SLE), systemic sclerosis, and myositis. Antibodies targeting the Smith/RNP antigenic complex also recognize Smith antigens, therefore, the Smith antibody response must be considered when interpreting these results.

i4: Jo-1 (Histidyl-tRNA Synthetase) Ab, IgG

INTERPRETIVE INFORMATION: Jo-1 Antibody, IgG

Test Information

i4: Jo-1 (Histidyl-tRNA Synthetase) Ab, IgG

29 AU/mL or less.....Negative
30-40 AU/mL.....Equivocal
41 AU/mL or greater.....Positive

Presence of Jo-1 (antihistidyl transfer RNA [t-RNA] synthetase) antibody is associated with polymyositis and may also be seen in patients with dermatomyositis. Jo-1 antibody is associated with pulmonary involvement (interstitial lung disease), Raynaud phenomenon, arthritis, and mechanic's hands (implicated in antisynthetase syndrome).

i5: PM/Scl 100 Antibody, IgG

INTERPRETIVE INFORMATION: PM/Scl-100 Antibody, IgG by Immunoblot

The presence of PM/Scl-100 IgG antibody along with a positive ANA IFA nucleolar pattern is associated with connective tissue diseases such as polymyositis (PM), dermatomyositis (DM), systemic sclerosis (SSc), and polymyositis/systemic sclerosis overlap syndrome. The clinical relevance of PM/Scl-100 IgG antibody with a negative ANA IFA nucleolar pattern is unknown. PM/Scl-100 is the main target epitope of the PM/Scl complex, although antibodies to other targets not detected by this assay may occur.

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: Fibrillarin (U3 RNP) Ab, IgG

Interpretive Information: Fibrillarin (U3 RNP) Antibody, IgG

The presence of fibrillarin (U3-RNP) IgG antibodies in association with an ANA IFA nucleolar pattern is suggestive of systemic sclerosis (SSc). In SSc, these antibodies are associated with distinct clinical features, such as younger age at disease onset, frequent internal organ involvement (pulmonary hypertension, myositis and renal disease). Fibrillarin antibodies are detected more frequently in African American patients with SSc compared to other ethnic groups. Strong correlation with ANA IFA results is recommended.

In a multi-ethnic cohort of SSc patients (n=98), U3-RNP antibodies detected by immunoblot had an agreement of 98.9 percent with the gold standard immunoprecipitation (IP) assay. Approximately 71 percent (5/7) of the borderline U3-RNP results with ANA nucleolar pattern in this cohort were IP negative.

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Test Information

i6: Fibrillarin (U3 RNP) Ab, IgG
Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

i7: Myositis Panel Interpretive Data
INTERPRETIVE INFORMATION: Extended Myositis Panel 2

If present, myositis-specific antibodies (MSAs) are specific for myositis, and may be useful in establishing diagnosis as well as prognosis. MSAs are generally regarded as mutually exclusive with rare exceptions; the occurrence of two or more MSAs should be carefully evaluated in the context of patient's clinical presentation. Myositis-associated antibodies (MAAs) may be found in patients with CTD including overlap syndromes, and are generally not specific for myositis. The following table will help in identifying the association of any antibodies found as either MSAs or MAAs.

Antibody Specificity	MSAs	MAAs
SSA 52 (Ro) (ENA) Antibody IgG	X	
SSA 60 (Ro) (ENA) Antibody IgG	X	
Smith/RNP (ENA) Ab, IgG	X	
Jo-1 (histidyl-tRNA synthetase) Ab, IgG	X	
PL-12 (alanyl-tRNA synthetase) Antibody	X	
PL-7 (threonyl-tRNA synthetase) Antibody	X	
EJ (glycyl-tRNA synthetase) Antibody	X	
OJ (isoleucyl-tRNA synthetase) Antibody	X	
SRP (Signal Recognition Particle) Ab	X	
Ku Antibody		X
PM/SCL 100 Antibody, IgG		X
Fibrillarin (U3 RNP) Ab, IgG		X
Mi-2 (nuclear helicase protein) Antibody	X	
P155/140 Antibody	X	
TIF-1 gamma (155 kDa) Ab	X	
SAE1 (SUMO activating enzyme) Ab	X	
MDA5 (CADM-140) Ab	X	
NXP2 (Nuclear matrix proten-2)Ab	X	
Ha (tyrosyl-tRNA synthetase) Ab.	X	
Ks (asparaginyl-tRNA synthetase) Ab	X	
Zo (phenylalanyl-tRNA synthetase) Ab	X	

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Test Information

i8: ANA Interpretive Comment

INTERPRETIVE INFORMATION: ANA Interpretive Comment

Presence of antinuclear antibodies (ANA) is a hallmark feature of systemic autoimmune rheumatic diseases (SARD). However, ANA lacks diagnostic specificity and is associated with a variety of diseases (cancers, autoimmune, infectious, and inflammatory conditions) and may also occur in healthy individuals in varying prevalence. The lack of diagnostic specificity requires confirmation of positive ANA by more specific serologic tests. ANA (nuclear reactivity) positive patterns reported include centromere, homogeneous, nuclear dots, nucleolar, or speckled. ANA (cytoplasmic reactivity) positive patterns reported include reticular/AMA, discrete/GW body-like, polar/golgi-like, cytoplasmic speckled or rods and rings. All positive patterns are reported to endpoint titers (1:2560). Reported patterns may help guide differential diagnosis, although they may not be specific for individual antibodies or diseases. Mitotic staining patterns not reported. Negative results do not necessarily rule out SARD.

i9: HMGCR Antibody, IgG

INTERPRETIVE INFORMATION: HMGCR Antibody, IgG

IgG antibodies to 3-hydroxy-3-methylglutaryl-coenzyme A reductase (HMGCR) are mainly associated with necrotizing autoimmune myopathy (NAM) in a subset of statin-treated patients. Although infrequent, these antibodies may also be observed in statin-naive patients with NAM. Strong clinical correlation is recommended in the absence of muscle fiber necrosis, elevated serum creatine kinase, perimysial pathology, and/or statin exposure.

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