Extended Myositis Panel

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Myositis is characterized by inflammation of the skeletal muscles involved in movement.[1,2] The detection of antibodies may help to establish a diagnosis, aid in prognosis, and support treatment decisions.

Featured ARUP Testing

Extended Myositis Panel 3001781

Method: Semi-Quantitative Enzyme-Linked Immunosorbent Assay/Qualitative Immunoprecipitation/Semi-Quantitative Multiplex Bead Assay/Qualitative Immunoblot

May be useful for differential evaluation of polymyositis, dermatomyositis, necrotizing autoimmune myopathy, or overlap syndromes associated with connective tissue disease

Disease Overview

Myositis may occur in a number of inflammatory myopathies, including polymyositis/antisynthetase syndrome, dermatomyositis, necrotizing autoimmune myopathy, and sporadic inclusion body myositis, as well overlap syndromes with connective tissue disease.[1,2] The primary symptom of all forms of myositis is progressive muscle weakness that may develop over a period of weeks, months, or years.[1,2] Other symptoms may include joint pain and fatigue.[1,2]

Antibody testing for myositis should be considered after a standard workup for inflammatory myopathies because it may aid in distinguishing between myopathies,[1,2] which can have important implications for therapy and prognosis.

Refer to the ARUP Consult Inflammatory Myopathies – Myositis topic for more information about myositis and the typical testing strategy for inflammatory myopathies.

Test Description

This antibody panel test may be useful for the evaluation of patients with progressive proximal muscle weakness and/or other clinical findings suggestive of polymyositis/antisynthetase syndrome, dermatomyositis, necrotizing autoimmune myopathy, or overlap syndromes associated with connective tissue disease. Clinical phenotypes for specific antibody-associated inflammatory myopathies often overlap, and targeted panels allow for rapid identification of associated antibodies. Use of the most targeted panel, ie, the panel that most closely matches the patient's complete clinical phenotype, is recommended:

Additional ARUP Myositis Panels	
ARUP Panel to Consider	**Clinical Utility**
Dermatomyositis and Polymyositis Panel 3001783 Includes a subset of the antibodies on this panel that are specific to dermatomyositis and polymyositis	May be useful for the evaluation of patients with progressive proximal muscle weakness and/or with cutaneous manifestations suggestive of dermatomyositis and/or associated connective tissue disease
Polymyositis Panel 2013990 Includes a subset of the antibodies on this panel that are specific to polymyositis	May be useful for the evaluation of patients with progressive proximal muscle weakness and antisynthetase syndrome
Dermatomyositis Autoantibody Panel 3001782 Includes a subset of the antibodies on this panel that are specific to dermatomyositis	May be useful for the evaluation of patients with characteristic cutaneous manifestations of dermatomyositis with or without muscle weakness
Interstitial Lung Disease Autoantibody Panel 3001784 Antibodies overlap with the antibodies on this panel Refer to the Interstitial Lung Disease Autoantibody Panel Test Fact Sheet for more information	May be useful for the evaluation of patients with interstitial lung disease with or without other signs and symptoms of myositis

Antibodies Tested

This panel detects a selection of antibodies specific to or associated with myositis. For more information about the clinical associations with each of these antibodies, visit the ARUP Consult Inflammatory Myopathies – Myositis topic.

Extended Myositis Panel: Antibodies Detected and Methodology	
Myositis-Associated Abs	
Antibody	**Method**
Fibrillarin (U3 RNP) Ab, IgG	Qualitative immunoblot
Ku Ab	Qualitative immunoprecipitation
PM/Scl-100 Ab, IgG	Qualitative immunoblot
SSA-52 (Ro52) (ENA) Ab, IgG	Semiquantitative multiplex bead assay
SSA-60 (Ro60) (ENA) Ab, IgG	Semiquantitative multiplex bead assay
Smith/RNP (ENA) Ab, IgG	Semiquantitative multiplex bead assay
Myositis-Specific Abs[a]	
Dermatomyositis Abs[b]	
Antibody	**Method**
MDA5 (CADM-140) Ab	Qualitative immunoblot
Mi-2 (nuclear helicase protein) Ab	Qualitative immunoprecipitation
NXP2 (nuclear matrix protein-2) Ab	Qualitative immunoblot
P155/140 Ab	Qualitative immunoprecipitation
SAE1 (SUMO activating enzyme) Ab	Qualitative immunoblot
TIF-1 gamma (155 kDa) Ab	Qualitative immunoblot
Polymyositis Abs[c]	
Antibody	**Method**
EJ (glycyl-tRNA synthetase) Ab	Qualitative immunoprecipitation
Jo-1 (histidyl-tRNA synthetase) Ab, IgG	Semiquantitative multiplex bead assay
OJ (isoleucyl tRNA synthetase) Ab	Qualitative immunoprecipitation
PL-7 (threonyl-tRNA synthetase) Ab	Qualitative immunoprecipitation
PL-12 (alanyl-tRNA synthetase) Ab	Qualitative immunoprecipitation
SRP (signal recognition particle) Ab	Qualitative immunoprecipitation

[a]This subset of antibodies is also available as a combined dermatomyositis and myositis panel.

[b]This subset of antibodies is also available as a dermatomyositis panel.

[c]This subset of antibodies is also available as a polymyositis panel.

Ab, antibody; ENA, extractable nuclear antigen; IgG, immunoglobulin G; RNP, ribonucleoprotein

Some antibodies may be orderable separately; refer to the ARUP Lab Test Directory.

Test Interpretation

Results

- **Positive:** Antibody detected.
  - Supports a clinical diagnosis of dermatomyositis, polymyositis, necrotizing autoimmune myopathy, and/or an overlap syndrome.
  - Results for specific antibodies may be reported as low/weak positive, positive, or high/strong positive. Additional interpretive information for positive antibodies may be provided on the Patient Report.
  - Myositis-specific antibodies are generally regarded as mutually exclusive with rare exceptions; the occurrence of two or more myositis-specific antibodies should be carefully evaluated in the context of the patient's clinical presentation.
  - Myositis-associated antibodies may be found in patients with overlap syndromes and other conditions, and are generally not specific for myositis.
- **Negative:** Antibody not detected.

Limitations

Results are not diagnostic in the absence of other findings, and should be considered in the complete clinical context.

Negative results do not rule out a diagnosis of inflammatory myopathy or overlap syndrome.

References

1. Selva-O'Callaghan A, Pinal-Fernandez I, Trallero-Araguás E, et al. Classification and management of adult inflammatory myopathies. *Lancet Neurol.* 2018;17(9):816-828.

2. Schmidt J. Current classification and management of inflammatory myopathies. *J Neuromuscul Dis.* 2018;5(2):109-129.

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