Dermatomyositis Autoantibody Panel

Last Literature Review: March 2024 Last Update: January 2025

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

Dermatomyositis Autoantibody Panel 3018870

Method: Qualitative Immunoprecipitation / Qualitative Immunoblot / Semi-Quantitative Indirect Fluorescent Antibody (IFA)

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 as overlap syndromes with connective tissue diseases.[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 dermatomyositis 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 characteristic cutaneous manifestations of dermatomyositis with or without progressive proximal muscle weakness. 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	Additional Test Information
Dermatomyositis and Polymyositis Panel 3018866 Antibodies overlap with the antibodies on this panel	May be useful for the evaluation of patients with progressive proximal muscle weakness and/or with cutaneous manifestations suggestive of dermatomyositis	Dermatomyositis and Polymyositis Panel Test Fact Sheet
Polymyositis Panel 3018868 Includes antibodies that are specific to polymyositis	May be useful for the evaluation of patients with progressive proximal muscle weakness and antisynthetase syndrome	Polymyositis Panel Test Fact Sheet
Extended Myositis Panel 3018867 Antibodies overlap with the antibodies on this panel	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	Extended Myositis Panel Test Fact Sheet

ARUP Panel to Consider	Clinical Utility	Additional Test Information
Interstitial Lung Disease Autoantibody Panel 3018869 Antibodies overlap with the antibodies on this panel	May be useful for the evaluation of patients with interstitial lung disease with or without other signs and symptoms of myositis	Interstitial Lung Disease Autoantibody Panel Test Fact Sheet

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.

Dermatomyositis Panel: Antibodies Detected and Methodology	
Myositis-Specific Antibodies[a]	
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
Myositis-Associated Antibodies	
Antinuclear Ab (ANA), Hep-2, IgG[b]	Semiquantitative indirect fluorescent antibody

[a]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. Refer to the ARUP Consult Inflammatory Myopathies – Myositis topic for more information about myositis.

[b]The presence of ANA is a feature of systemic autoimmune rheumatic diseases, however, ANA lacks diagnostic specificity and may occur in the general population. Positive ANA must be confirmed by more specific serologic tests. For more information, refer to the Antinuclear Antibody (ANA) With Hep-2 Substrate Test Fact Sheet.

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

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

Test Interpretation

Results

- **Positive:** Antibody detected.
  - Supports a clinical diagnosis of dermatomyositis 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.

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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