# Autoimmune Neuromuscular Junction Reflexive Panel

Last Literature Review: July 2023 Last Update: September 2024

Autoimmune neuromuscular junction disorders are a broad range of rare, acquired conditions that affect the peripheral nervous system. Antibodies associated with these conditions can serve as useful markers of disease and help guide treatment.[1]

## Featured ARUP Testing

Autoimmune Neuromuscular Junction Reflexive Panel 3003017

**Method:** Quantitative Radioimmunoassay/Qualitative Radiobinding Assay/Semi-Quantitative Flow Cytometry/Semi-Quantitative Indirect Fluorescent Antibody

## Disease Overview

Autoimmune neuromuscular junction disorders generally develop subacutely and can progress rapidly. They are characterized by fatigable weakness which may affect ocular, bulbar, axial, and respiratory muscles.[1] Antineural antibodies serve as useful markers of these diseases, and their detection may help establish a diagnosis, support treatment decisions, aid prognostication, serve as a prerequisite for enrollment in clinical trials, and guide the search for an associated malignancy.

For more information about laboratory testing for autoimmune neurologic diseases, including detailed information about panel test selection, refer to the ARUP Consult Autoimmune Neurologic Diseases - Antineural Antibody Testing topic. For more information about the testing strategy for myasthenia gravis, refer to the ARUP Consult Myasthenia Gravis - MG topic.

## Test Description

ARUP's Autoimmune Neuromuscular Junction Reflexive Panel can be used for the evaluation of suspected acquired autoimmune neuromuscular junction disorders.

This test is not recommended for the initial evaluation of myasthenia gravis. For more information on ARUP's myasthenia gravis testing, refer to the Myasthenia Gravis Testing Test Fact Sheet.

Testing for individual autoantibodies is also available separately and can be used for long-term monitoring.

### Antibodies Tested and Methodology

**Autoimmune Neuromuscular Junction Reflexive Panel (3003017): Antibodies Tested and Methodology**

| Autoantibody Marker | Method | Individual Autoantibody Test Code |
|---|---|---|
| AChR Binding Ab, IgG | RIA | 0080009 |
| AChR Blocking Ab, IgG | Flow cytometry | 0099580 |
| AChR Modulating Ab, IgG[a] | Flow cytometry | 0099521 |
| CASPR2 Ab, IgG[a] | CBA-IFA, reflex titer | 2009452 |
| Ganglionic AChR Ab | RIA | 3003020 |
| LGI1 Ab, IgG[a] | CBA-IFA, reflex titer | 2009456 |
| N-type VGCC Ab, IgG | RIA | — |
| P/Q-type VGCC Ab, IgG | RIA | 0092628 |
| Striated Muscle Abs, IgG | IFA, reflex titer | 0050746 |
| Titin Ab, IgG | IFA | 2005636 |

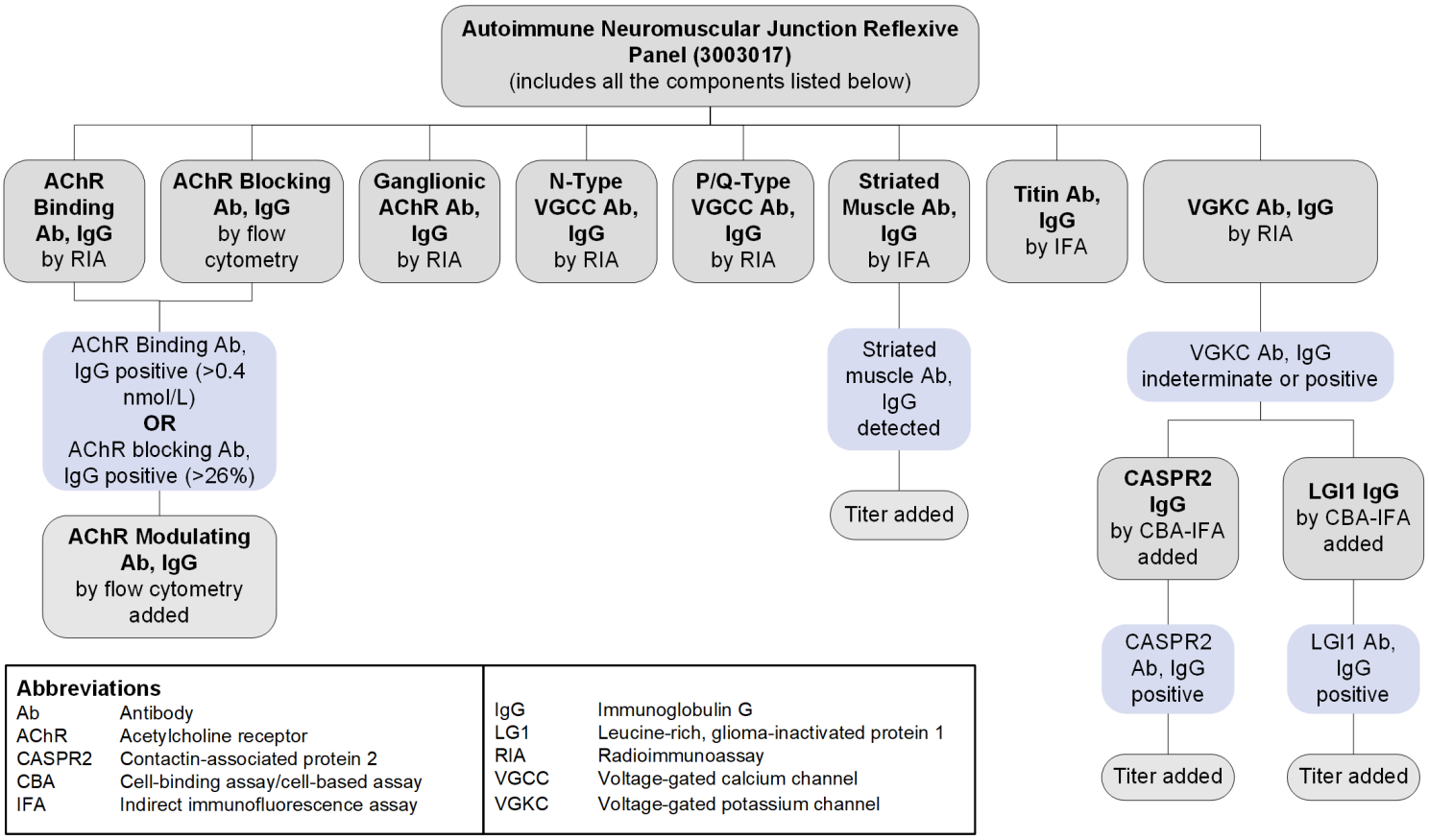
| Autoantibody Marker | Method | Individual Autoantibody Test Code |
|---|---|---|
| VGKC Ab, IgG | RIA | 2004890 |

[a]Performed via reflex only, depending on the results of other autoantibody tests; refer to Reflex Pattern diagram.

Ab, antibody; AChR, acetylcholine receptor; CASPR2, contactin-associated protein 2; CBA, cell-binding assay/cell-based assay; IFA, indirect immunofluorescence assay; Ig, immunoglobulin; LGI1, leucine-rich, glioma-inactivated protein 1; mGluR1, metabotropic glutamate receptor 1; MOG, myelin oligodendrocyte glycoprotein; NMDAR, N-methyl-D-aspartate receptor; PCCA, Purkinje cell cytoplasmic antibody; RIA, radioimmunoassay; VGCC, voltage-gated calcium channel; VGKC, voltage-gated potassium channel

## Reflex Patterns

Autoimmune Neuromuscular Junction Reflexive Panel (3003017): Reflex Pattern




## Limitations

These tests do not include all known antineural antibodies:

- Some antibodies are extremely rare or are of uncertain clinical significance.
- As testing for newly described antibodies becomes available and their clinical relevance is established, these panels will evolve to reflect these discoveries.

# Test Interpretation

## Results

Results must be interpreted in the clinical context of the individual patient; test results (positive or negative) should not supersede clinical judgment.

| Autoimmune Neuromuscular Junction Reflexive Panel (3003017): Results Interpretation | |
|---|---|
| Result | Interpretation |
| Positive for ≥1 autoantibodies | Autoantibody(ies) detected |

| Result | Interpretation |
| --- | --- |
| | May support a diagnosis of an autoimmune neuromuscular junction disorder |
| Negative | No autoantibodies detected<br>A diagnosis of an autoimmune neuromuscular junction disorder is not excluded |

## References


1. Lazaridis K, Tzartos SJ. Autoantibody specificities in myasthenia gravis; implications for improved diagnostics and therapeutics. *Front Immunol*. 2020;11:212.



ARUP Laboratories is a nonprofit enterprise of the University of Utah and its Department of Pathology. 500 Chipeta Way, Salt Lake City, UT 84108
(800) 522-2787 | (801) 583-2787 | aruplab.com | arupconsult.com