Autoimmune Vision Loss Panel, Serum

Last Literature Review: October 2023 Last Update: February 2024

Disease Overview

Vision loss may be a symptom of many conditions, including paraneoplastic autoimmune neurologic diseases such as cancer-associated retinopathy and paraneoplastic optic neuropathy.[1,2] While these diseases are less common than vision loss due to optic neuritis (as seen in multiple sclerosis and neuromyelitis optica spectrum disorders),[1] including them in the differential for vision loss has important implications for cancer screening and treatment.

Featured ARUP Testing

Autoimmune Vision Loss Panel, Serum 3016804

Method: Qualitative Immunoblot/Semi-Quantitative Cell-Based Indirect Fluorescent Antibody

For more information about the testing strategy for the following conditions, refer to ARUP Consult topics:

- Multiple Sclerosis
- Neuromyelitis Optica Spectrum Disorders
- Autoimmune Neurologic Disease - Antineural Antibody Testing

Test Description

Consider this phenotype-targeted panel for the evaluation of a subacute onset of progressive bilateral vision loss when there is concern for a paraneoplastic autoimmune etiology.

This panel includes antibodies associated with paraneoplastic vision loss[1,2]; if there is concern for demyelinating disease, consider the Autoimmune CNS Demyelinating Disease Reflexive Panel, which includes AQP4 and MOG antibodies. To compare these panels and the antibodies included, refer to ARUP Autoimmune Neurology Panel Components. Testing for individual antibodies is also available separately.

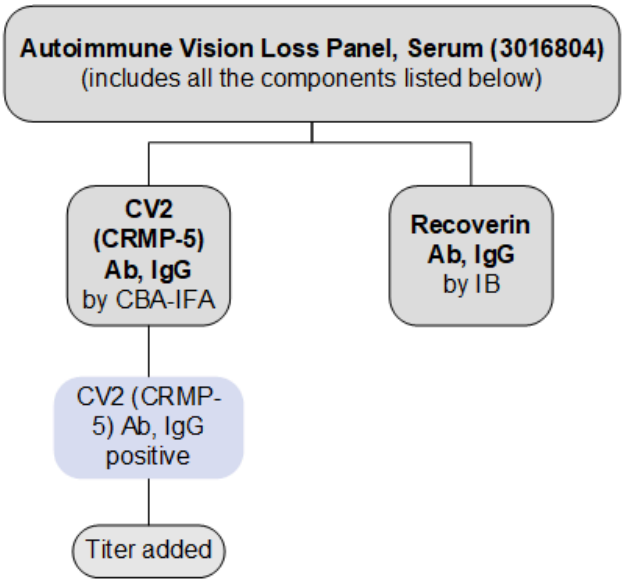
Antibodies Tested and Methodology

Autoimmune Vision Loss Panel, Serum (3016804): Antibodies Tested and Methodology

	Methodology	Individual Autoantibody Test Code
CV2 (CRMP-5) Ab, IgG	CBA-IFA	3016999
Recoverin Ab, IgG	IB	3016794

Ab, antibody; CBA, cell-binding assay/cell-based assay; CRMP-5, collapsin response-mediator protein 5; IB, immunoblot; IFA, indirect immunofluorescence assay; IgG, immunoglobulin G

Reflex Patterns



Abbreviations	
Ab	Antibody
CBA	Cell-binding assay/cell-based assay
CRMP-5	Collapsin response-mediator protein 5
IB	Immunoblot
IFA	Indirect immunofluorescence assay
IgG	Immunoglobulin G

Limitations

This panel does not include every antibody that has been associated with autoimmune vision loss. As testing for newly described antibodies becomes available and their clinical relevance is established, this panel will evolve to reflect these discoveries.

Test Interpretation

Results

Results should be interpreted in the context of the patient's clinical history, neurologic and ophthalmologic exam, and other laboratory findings. Test results (positive or negative) should not supersede clinical judgment.

Autoimmune Vision Loss Panel, Serum (3016804): Results Interpretation	
Result	**Interpretation**
Positive for ≥1 autoantibodies	Autoantibody(ies) detected Supports a clinical diagnosis of autoimmune vision loss Consider a focused search for malignancy based on established antibody-tumor associations
Negative	No autoantibodies detected A diagnosis of autoimmune vision loss is not excluded

References

1. Petzold A, Wong S, Plant GT. Autoimmunity in visual loss. *Handb Clin Neurol*. 2016;133:353-376.

2. Wang S, Hou H, Tang Y, et al. An overview on CV2/CRMP5 antibody-associated paraneoplastic neurological syndromes. *Neural Regen Res*. 2023;18(11):2357-2364.

Related Information

ARUP Autoimmune Neurology Panel Components

Autoimmune Neurologic Diseases - Antineural Antibody Testing

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