

Overview

Useful For

Only orderable as a reflex. For more information see:

DMS2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Serum

ENS2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Serum

EPS2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Serum

MDS2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Serum

PCDES / Pediatric Autoimmune Encephalopathy/CNS Disorder Evaluation, Serum

Evaluation of patients suspected to have autoimmune encephalitis using serum specimens

Method Name

Only orderable as a reflex. For more information see:

-DMS2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Serum

-ENS2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Serum

-EPS2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Serum

-MDS2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Serum

-PCDES / Pediatric Autoimmune Encephalopathy/CNS Disorder Evaluation, Serum

Indirect Immunofluorescence Assay (IFA)

NY State Available

Yes

Specimen

Specimen Type

Serum

Specimen Required

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-EPS2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Serum

-MDS2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Serum

-PCDES / Pediatric Autoimmune Encephalopathy/CNS Disorder Evaluation, Serum

Specimen Minimum Volume

Test Definition: GL5TS

Metabotropic Glutamate Receptor-5 (mGluR5)
IgG, Tissue Immunofluorescence Titer, Serum
(Non-Orderable)

Serum: 1 mL

Reject Due To

Gross hemolysis	Reject
Gross lipemia	Reject
Gross icterus	Reject

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	72 hours	
	Frozen	28 days	

Clinical & Interpretive

Clinical Information

Metabotropic glutamate receptor-5 (mGluR5-IgG) is a marker of autoimmune encephalitis. Patients who are mGluR5-IgG positive present with neuropsychiatric syndrome, cognitive decline, movement disorders, sleep dysfunction and seizures, which can occur with or without tumor.

Reference Values

- Only orderable as part of a profile. For more information see:
- DMS2 / Dementia, Autoimmune/Paraneoplastic Evaluation, Serum
 - ENS2 / Encephalopathy, Autoimmune/Paraneoplastic Evaluation, Serum
 - EPS2 / Epilepsy, Autoimmune/Paraneoplastic Evaluation, Serum
 - MDS2 / Movement Disorder, Autoimmune/Paraneoplastic Evaluation, Serum
 - PCDES / Pediatric Autoimmune Encephalopathy/CNS Disorder Evaluation, Serum

<1:240

Interpretation

A positive result is consistent with metabotropic glutamate receptor-5 (mGluR5) autoimmunity that manifests as autoimmune encephalitis.

Cautions

A negative result does not exclude the diagnosis of autoimmune encephalitis.

Clinical Reference

1. Spatola M, Sabater L, Planaguma J, et al. Encephalitis with mGluR5 antibodies: Symptoms and antibody effects.

Test Definition: GL5TS

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Neurology. 2018;90(22):e1964-e1972. doi:10.1212/WNL.0000000000005614

2. Maudes E, Mannara F, Garcia-Serra A, et al. Human metabotropic glutamate receptor 5 antibodies alter receptor levels and behavior in mice. Ann Neurol. 2022;92(1):81-86. doi:10.1002/ana.26362

3. Lancaster E, Martinez-Hernandez E, Titulaer MJ, et al. Antibodies to metabotropic glutamate receptor 5 in the Ophelia syndrome. Neurology 2011;77(18):1698-1701. doi:10.1212/WNL.0b013e3182364a44

Performance

Method Description

The patient's sample is tested by a standardized immunofluorescence assay that uses a composite frozen section of mouse cerebellum, kidney, and gut tissues. After incubation with the sample and washing, fluorescein-conjugated goat-antihuman IgG is applied. Neuron-specific autoantibodies are identified by their characteristic fluorescence staining patterns. Sample that score positive for any neuronal nuclear or cytoplasmic autoantibody are titrated. Interference by coexisting non-neuron-specific autoantibodies can usually be eliminated by serologic absorption.(Honorat JA, Komorowski L, Josephs KA, et al. IgLON5 antibody: Neurological accompaniments and outcomes in 20 patients. Neurol Neuroimmunol Neuroinflamm. 2017;4(5):e385. Published 2017 Jul 18. doi:10.1212/NXI.0000000000000385)

PDF Report

No

Day(s) Performed

Varies

Report Available

5 to 10 days

Specimen Retention Time

2 days

Performing Laboratory Location

Mayo Clinic Laboratories - Rochester Main Campus

Fees & Codes

Fees

- Authorized users can sign in to [Test Prices](#) for detailed fee information.
- Clients without access to Test Prices can contact [Customer Service](#) 24 hours a day, seven days a week.
- Prospective clients should contact their account representative. For assistance, contact [Customer Service](#).

Test Classification

Test Definition: GL5TS

Metabotropic Glutamate Receptor-5 (mGluR5)
IgG, Tissue Immunofluorescence Titer, Serum
(Non-Orderable)

This test was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. It has not been cleared or approved by the US Food and Drug Administration.

CPT Code Information

86256

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
GL5TS	mGluR5 Ab IFA Titer, S	In Process

Result ID	Test Result Name	Result LOINC® Value
623488	mGluR5 Ab IFA Titer, S	In Process