MAYO CLINIC LABORATORIES

Test Definition: OLIGC

Oligoclonal Banding, Spinal Fluid

Overview

Useful For

Diagnosis of multiple sclerosis; especially useful in patients with equivocal clinical presentation and radiological findings

Method Name

Only orderable as part of a profile. For more information, see:
-OLIG / Oligoclonal Banding, Serum and Spinal Fluid
-MSP3 / Multiple Sclerosis (MS) Profile, Serum and Spinal Fluid

Isoelectric Focusing (IEF) with IgG Immunoblot Detection

NY State Available

Yes

Specimen

Specimen Type

CSF

Specimen Required

Only orderable as part of a profile. For more information, see:
-OLIG / Oligoclonal Banding, Serum and Spinal Fluid
-MSP3 / Multiple Sclerosis (MS) Profile, Serum and Spinal Fluid

Specimen Type: Spinal fluid
Container/Tube: Sterile vial
Specimen Volume: 0.5 mL
Collection Instructions: Label specimen as spinal fluid.

Specimen Minimum Volume

See Specimen Required

Reject Due To

All specimens will be evaluated at Mayo Clinic Laboratories for test suitability.

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	

	Ambient	14 days	
	Frozen	14 days	

Clinical & Interpretive

Clinical Information

The diagnosis of multiple sclerosis (MS) is dependent on clinical, radiological, and laboratory findings. The detection of increased intrathecal immunoglobulin (Ig) synthesis is the basis for current diagnostic laboratory tests for MS. These tests include the cerebrospinal fluid (CSF) IgG index and CSF oligoclonal band (OCB) detection. Abnormal CSF IgG indexes and OCB patterns have been reported in 70% to 80% of MS patients.

Increased intrathecal Ig synthesis may occur in other inflammatory CSF diseases and, therefore, this assay is not specific for MS.

Reference Values

Only orderable as part of a profile. For more information, see:
-OLIG / Oligoclonal Banding, Serum and Spinal Fluid
-MSP3 / Multiple Sclerosis (MS) Profile, Serum and Spinal Fluid

Cerebrospinal fluid Oligoclonal Bands Interpretation: <2 bands

Interpretation

When the oligoclonal band assay detects 2 or more unique IgG bands in the cerebrospinal fluid (CSF), the result is positive.

CSF is used in the diagnosis of multiple sclerosis (MS) by identifying increased intrathecal IgG synthesis qualitatively (oligoclonal bands). The presence of 2 or more unique CSF oligoclonal bands was reintroduced as one of the diagnostic criteria for MS in the 2017 revised McDonald criteria. These findings however, are not specific for MS as CSF-specific IgG synthesis may also be found in patients with other neurologic diseases including infectious, inflammatory, cerebrovascular, and paraneoplastic disorders. Clinical correlation recommended.

Cautions

These tests are not specific for multiple sclerosis.

Clinical Reference

1. Andersson M, Alvarez-Cermeno J, Bernardi G, et al: Cerebrospinal fluid in the diagnosis of multiple sclerosis: a consensus report. J Neurol Neurosurg Psychiatry. 1994 Aug;57(8):897-902
2. Fortini AS, Sanders EL, Weinshenker BG, Katzmann JA: Cerebrospinal fluid oligoclonal bands in the diagnosis of multiple sclerosis, isoelectric focusing with the IgG immunoblotting compared with high resolution agarose gel electrophoresis and cerebrospinal fluid IgG index. Am J Clin Pathol. 2003 Nov:120(5):672-675
3. Thompson AJ, Banwell BL, Barkhof F, et al: Diagnosis of multiple sclerosis: 2017 revisions of the McDonald criteria. Lancet Neurol. 2018 Feb;17(2):162-173
4. Gurtner KM, Shosha E, Bryant SC, et al: CSF free light chain identification of demyelinating disease: comparison with oligoclonal banding and other CSF indexes. Clin Chem Lab Med. 2018 Jun 27;56(7):1071-1080
5. Saadeh R, Pittock S, Bryant S, et al: CSF kappa free light chains as a potential quantitative alternative to oligoclonal

bands in multiple sclerosis. Neurology. 2019 April 09;2019:92

Performance

Method Description

The oligoclonal band (OCB) assay requires paired cerebrospinal fluid (CSF) and serum samples. Unconcentrated CSF and diluted serum are electrophoresed by isoelectric focusing. The separated immunoglobulins (Ig) are visualized by an IgG immunoblot, and OCBs that are present in the CSF and not in the serum are reported. The assay uses reagents from Helena Laboratories.(Keir G, Luxton RW, Thompson EJ: Isoelectric focusing of cerebrospinal fluid immunoglobulins G: an annotated update. Ann Clin Biochem. 1990;27:436-443; Hortin GL: Amino Acids, Peptides, and Proteins. In: Burtis CA, Burns DE, Sawyer BG, eds. Tietz Fundamentals of Clinical Chemistry and Molecular Diagnostics. 7th ed. Elsevier; 2015:chap 18)

PDF Report

No

Day(s) Performed

Monday through Friday

Report Available

4 to 7 days

Specimen Retention Time

14 days

Performing Laboratory Location

Rochester

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

This test has been cleared, approved, or is exempt by the US Food and Drug Administration and is used per manufacturer's instructions. Performance characteristics were verified by Mayo Clinic in a manner consistent with CLIA requirements.

CPT Code Information

83916

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
OLIGC	CSF Bands	In Process

Result ID	Test Result Name	Result LOINC® Value
8017	CSF Bands	49852-7
23611	CSF Olig Bands Interpretation	100756-6