MAYO CLINIC LABORATORIES

Test Definition: OLIGS

Oligoclonal Banding, Serum

Overview

Useful For

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

Determining number of serum oligoclonal bands in order to calculate the number of cerebrospinal fluid-specific bands present

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

Serum

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

Collection Container/Tube:
Preferred: Serum gel
Acceptable: Red top
Submission Container/Tube: Plastic vial
Specimen Volume: 0.5 mL
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume

0.4 mL

Reject Due To

Gross	OK

hemolysis	
Gross lipemia	Reject
Gross icterus	OK

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Serum	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 kappa free light chains in the cerebrospinal fluid (CSF) and CSF oligoclonal band (OCB) detection. Abnormal CSF 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

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;57:897-902
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. 2003:120:672-675
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;56:1071-1080
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, Bruns DE, 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

Test Definition: OLIGS

Oligoclonal Banding, Serum

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
OLIGS	Serum Bands	In Process

Result ID	Test Result Name	Result LOINC® Value
2783	Serum Bands	100755-8