

Multiple Sclerosis (MS) Cascade, Serum and Spinal Fluid

Patient ID SA00172906	Patient Name TESTINGRNV, MSP3 N	Birth Date 1980-09-09	Sex M	Age 44
Order Number SA00172906	Client Order Number SA00172906	Ordering Physician CLIENT,CLIENT	Report Notes	
Account Information C7028846 DLMP Rochester		Collected 12 Nov 2024 06:00		

Multiple Sclerosis Cascade

Kappa Free Light Chain, CSF

0.0599 mg/dL

Negative.

The kappa free light concentration measured in CSF is lower than the threshold associated with multiple sclerosis. Clinical correlation recommended.

A Mayo Clinic study published in 2018 with 325 patients suggested that a kappa free light chain concentration in CSF greater than or equal to 0.06 mg/dL has 92% clinical sensitivity in the diagnosis of multiple sclerosis (ref 1). A second, larger Mayo Clinic study with 1355 patients published in 2021 showed that a kappa CSF concentration greater than or equal to 0.06 mg/dL had approximately 89% sensitivity. When kappa was greater than or equal to 0.1 mg/dL it had similar sensitivity (87%) to the finding of 2 unique CSF oligoclonal bands (89%) (ref 2). Given the difference in thresholds based on these studies and highest sensitivity at the threshold of 0.06mg/dL, any CSF kappa free light chain result greater than or equal to 0.06 mg/dL will reflex to oligoclonal banding when the multiple sclerosis profile tests are ordered. A result less than 0.06 mg/dL is considered negative. A

① SDL

Reference Value
<0.1000

result between 0.06 and 0.099 mg/dL is considered borderline; look for oligoclonal banding test results. A result greater than or equal to 0.1 mg/dL is considered positive; look for oligoclonal banding test results.

References:

1. Gurtner KM, Shosha E, Bryant SC, Andreguetto BD, Murray DL, Pittock SJ, et al. CSF free light chain identification of demyelinating disease: comparison with oligoclonal banding and other CSF indexes. Clin Chem Lab Med. 2018;56(7):1071–80.
2. Saadeh RS, Bryant SC, McKeon A, Weinshenker B, Murray DL, Pittock SJ, et al. CSF Kappa Free Light Chains: Cutoff Validation for Diagnosing Multiple Sclerosis. Mayo Clin Proc. 2021; S0025–6196(21)00710–2. doi: 10.1016/j.mayocp.2021.09.014.

Additional sample for reflex OLIGS

SDL

Collected

Received: 12 Nov 2024 13:46

Reported: 12 Nov 2024 13:46

Laboratory Notes

- ① This test has been modified from the manufacturer's instructions. Its performance characteristics were determined by Mayo Clinic in a manner consistent with CLIA requirements. This test has not been cleared or approved by the U.S. Food and Drug Administration.

Performing Site Legend

Code	Laboratory	Address	Lab Director	CLIA Certificate
SDL	Mayo Clinic Laboratories - Rochester Superior Drive	3050 Superior Drive NW, Rochester MN 55905	Nikola Baumann Ph.D.	24D1040592