

Low-Density Lipoprotein Receptor-Related Protein 4 Antibodies by Fixed Cell-Based Assay (LRP4 CBA)

Test Name	Low-density lipoprotein receptor-related protein 4 antibodies by CBA
Abbreviation	LRP4 Ab; LRP4 CBA
CPT code	N/A (Research Use Only)
Methodology	Fixed cell-based assay
Intended Use	Research Use Only (RUO)
Test requirements	<p><u>Specimen Type</u>: Serum</p> <p><u>Minimum volume</u>: 0.5 mL</p> <p><u>Preferred volume</u>: 5 mL</p> <p><u>Rejection criteria</u>: grossly hemolytic, icteric, or lipemic. If the cold-pack and sample are received at room temperature.</p>
Specimen collection	<ul style="list-style-type: none"> No patient preparation required before collection. 5 mL SST tube (gold-top). Spin tubes, aliquot serum, and ship on cold-packs same day
Specimen stability	<p>Up to 1 month refrigerated (2 - 8°C)</p> <p>Up to 2 weeks frozen (-20°C)</p> <p>Up to 3 months at ultra-low (-80°C – -70°C)</p> <p>Up to 4 freeze / thaws</p>
Test schedule	TBD
TAT	1 – 3 weeks
Reference range	N/A
Limitations	<ul style="list-style-type: none"> These test results are for research use only. Not to be used for diagnostic purposes. LRP4 Ab have been found in some ALS patients, results should be considered in conjunction with other clinical signs and symptoms. Please indicate if patients are on immunomodulating treatments as these may interfere with testing. Causal antibodies cannot be identified in about 10% of MG cases. Therefore, a positive result is specific for the diagnosis of LRP4 ab myasthenia gravis (MG), but a negative result does not rule out an MG diagnosis.
References	<ul style="list-style-type: none"> Frykman H, Kumar P, Oger J. Immunopathology of autoimmune myasthenia gravis: implications for improved testing algorithms and treatment strategies. <i>Front Neurol.</i> 2020 Frykman H, Kumar P. Laboratory Testing of Myasthenia Gravis: New Treatments Drive Change. <i>JALM.</i> 2021 Jul 1;6(4):1087-9. Cao M, Konecny I, Vincent A. Myasthenia gravis with antibodies against muscle specific kinase: an update on clinical features, pathophysiology and treatment. <i>Front Mol Neurosci.</i> 2020:159. Zisimopoulou P, et al. A comprehensive analysis of the epidemiology and clinical characteristics of anti-LRP4 in myasthenia gravis. <i>J Autoimmun.</i> 2014 Aug 1;52:139-45.