



Ganglioside Antibodies

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| Synonyms | Ganglioside antibody panel, Glycolipid antibodies, GM1, GD1a, GD1b, GT1b, GQ1b |
| Clinical Indication | <p>Peripheral neuropathies (acute/chronic, motor/sensory)</p> <p>Miller-Fisher syndrome</p> <p>It is essential to provide relevant clinical information.</p> |
| Part of Profile / See Also | |
| Request Form | Combined Pathology manual blood request form or ICE request |
| Availability / Frequency of Analysis | <p>Referred test: Analysed by Neuroimmunology Laboratory at The National Hospital for Neurology and Neurosurgery 8045</p> <p>Available for request from Consultant Neurologist.</p> |
| Turnaround Time | 21 days |
| Patient Preparation | No special preparation is required. |
| Sample Requirements | *Please note a separate sample is required when Immunology tests are requested in addition to Biochemistry tests* |
| Specimen Type | Serum |
| Volume | 7 ml |
| Container |  Yellow top (SST) tube.  Paediatric Yellow top (SST) tube |
| Reference Range & Units | <p>Results reported as Negative or Positive (serum titre of >1:750)</p> <p>Normal = negative</p> |
| Interferences | Haemolysed samples are unsuitable |
| Interpretation & Clinical Decision Value (if applicable) | <p>Ganglioside antibodies are measured in serum by an ELISA method. An initial screen is carried out with a single dilution of serum. If the screen is positive then serial dilutions of the sample are carried out to obtain the ganglioside antibody titre. A single negative test result does not exclude a pathological state, since both the development and decay of antibody activity is a continuous process.</p> <p>Gangliosides are acidic glycosphingolipids in the outer layer of plasma membranes.</p> <p>Multifocal motor neuropathy is associated with anti-GM1, -GA1 and -GD1b</p> |

IgM antibodies. Chronic ataxic neuropathy with ophthalmoplegia M-protein, cold agglutination, and disialosyl antibodies (acronym: CANOMAD) is associated with anti-GD1b and related IgM antibodies. Miller Fisher syndrome is associated with anti-GQ1b and -GT1a IgG antibodies. Acute motor axonal neuropathy (AMAN) is associated with anti-GM1 and -GD1a IgG antibodies. IgG to GM-1 is seen in Guillain Barre syndrome.

References

<https://www.uclh.nhs.uk/our-services/find-service/neurology-and-neurosurgery/neuroimmunology>

Goodfellow and Willison, **Gangliosides and Autoimmune Peripheral Nerve Diseases** *Progress in Molecular Biology and Translational Science* Volume 156, 2018, Pages 355-382

Test code

GANG

Lab Handling

Aliquot and store at 4-8°C prior to testing and at -20°C or below for up to 1 month after receipt.



8045

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ISO 15189:2012