

BÜHLMANN Anti-MAG & Anti-Ganglioside Autoantibody ELISAs – over 80 References: [most cited Anti-Ganglioside and -MAG Antibody tests](#)

BÜHLMANN GanglioCombi™

- **Toscano G et al., 2020**; Guillain-Barré Syndrome Associated with SARS-CoV-2 (Letter to the editor); NEJM; April 27, 2020
- **Delmont E et al., 2019**; Relevance of anti-HNK-1 Antibodies in the management of anti-MAG neuropathies. J Neurol; published online 14 May, 2019; <https://doi.org/10.1007/s00415-019-09367-0>
- **Choi K-D et al., 2019**; Characteristics of a single oculomotor nerve palsy associated with anti-GQ1b antibody; J Neurol 266: 476–479
- **Yoon L et al., 2019**; Clinical characterization of anti—GQ1b antibody syndrome in Korean children. J Neuroimmunology 15(330): 170-173
- **Lee S U et al., 2019**; Anti-ganglioside antibody associated acute unilateral vestibulopathy. J Neurol 266(1): 250-252
- **Sohn S Y and Kim J K, 2018**; Neutropenia Following Intravenous Immunoglobulin Administration in a Patient with Multifocal Motor Neuropathy with Conduction Block. J Neurol Neurophysiol 8:409. doi:10.4172/2155-9562.1000409
- **Franciotta D et al., 2018**; Anti-ganglioside antibodies: experience from the Italian Association of Neuroimmunology external quality assessment scheme. Clin Chem Lab Med; 56 (11): 1921-1925
- **Legast G M et al., 2017**; Guillain-Barré and Miller Fisher Overlap Syndrome Mimicking Alimentary Botulism. J Clin Neurol 13(4): 442-443
- **Han T H et al., 2017**; Transient Lower Bulbar Palsy with Elevated Serum anti-GM1 and Anti-GD1b Antibodies during Aripiprazole Treatment. Pediatr Neurol 66: 96-99.
- **Herrendorff R et al., 2017**; Selective *in vivo* removal of pathogenic anti-MAG autoantibodies, an antigen specific treatment option for anti-MAG neuropathy. PNAS, www.pnas.org/cgi/doi/10.1073/pnas.1619386114
- **Anaya J-M et al., 2017**; A comprehensive analysis and immunobiology of autoimmune neurological syndromes during the Zika virus outbreak in Cúcuta, Colombia. Journal of Autoimmunity 77: 123-138
- **Spatola M et al., 2016**; Serum and CSF GQ1b antibodies in isolated ophthalmologic syndromes. Neurology 86: 1780-1784

- **Cao-Lormeau V M et al., 2016:** Guillain-Barré Syndrome outbreak associated with Zika virus infection in French Polynesia: a case-control study. *Lancet* **387** (10027); 1531-1539 (incl. supplement).

“BÜHLMANN GanglioCombi at the forefront of newly emerging post-infectious forms of Guillain-Barré syndromes such as those associated with Zika viruses.

- **Kollewe K et al., 2015:** Anti-Ganglioside Antibodies in Amyotrophic Lateral Sclerosis Revisited. *PLoS One*, **10**(4): e0125339.

“BÜHLMANN GanglioCombi at the utmost importance of daily questions such as the differentiation between Multifocal Motor Neuropathies (MMN, treatable) and MMN- mimicking disorders such as Amyotrophic Lateral Sclerosis (ALS, not treatable).

This is the biggest ALS cohort investigated to date and demonstrates that frequency of anti-Ganglioside antibodies is not different from apparently healthy normal blood donors.”

Posters:

- **Delmont E et al., 2017:** Value of anti-HNK-1 Antibodies in anti-MAG Neuropathies: an analysis of 144 sera. Poster presented at **2017** “Peripheral Nerve Society” (PNS) Annual Meeting in Sitges (ES)

“Anti-MAG Antibodies have good sensitivity and specificity to detect anti-MAG Neuropathy. Notably, titres of anti-HNK-1 antibodies are related to the disease activity”

- **Chalah M A et al., 2016:** A comparison of four commercial tests for detecting anti-ganglioside antibodies in patients with well-characterized dysimmune peripheral neuropathies. Poster presented at “International Congress on Autoimmunity”, Leipzig (GE).

“BÜHLMANN GanglioCombi(R) ELISA compared to competitor Assays has best performance and qualifies for Assay of choice for daily clinical routine application.”

- **Mani B et al., 2010:** The Frequency of anti-Ganglioside Antibodies in Blood Donors Compared to Control Groups and Guillain-Barré Syndrome Patients. Poster presented at “10th Dresden Symposium on Autoantibodies”, Dresden (GE).
- **Wurster U et al., 2009:** Ganglioside Antibodies in Amyotrophic Lateral Sclerosis. Poster presented at “9th Dresden Symposium on Autoantibodies”, Dresden (GE).

further literature citing ganglioside Antibody ELISA tests by

- **Kenina V et al., 2015:** Clinical Impact and Relevance of Antiganglioside Antibodies Test Results. *Proc. Latvian Acad. Sci., Section B*, 69(5): 223-227
- **Uysalol M et al., 2013:** A Rare Form of Guillain-Barré Syndrome: A Child Diagnosed with Anti-GD1a and Anti-GD1b Positive Pharyngeal-Cervical-Brachial Variant. *Balkan Med J*; **30**:337-341
- **Lei T et al., 2012:** Anti-ganglioside antibodies were not detected in human subjects infected with or vaccinated against 2009 pandemic influenza A (H1N1) virus. *Vaccine* **30**: 2605-2610
- **Sharma M B et al., 2011:** The presence of *Mycoplasma pneumoniae* infection and GM1 ganglioside antibodies in Guillain-Barré syndrome. *J Infect Dev Countries* **5**(6): 459-464

BÜHLMANN anti-MAG Autoantibodies ELISA

- **Boscarino M et al., 2020:** Spinal Cord Impairment in anti-MAG Neuropathy: Evidence from Somatosensory Evoked Potentials. *Brain Sci.* **10**(282); 1-10
- **Colchester N T H et al., 2020:** Chemoimmunotherapy with rituximab, cyclophosphamide and prednisolone in IgM paraproteinaemic neuropathy: evidence of sustained improvement in electrophysiological, serological and functional outcomes. *Haematologica* **2020** [Epub ahead of print]
- **Pascual-Goñi E et al., 2019:** Clinical and laboratory features of anti-MASG neuropathy without monoclonal gammopathy. *Sci Rep* **16**; 9(1):6155. doi 1038/s41598-019-42545-8
- **Matà S et al., 2019:** Anti-MAG IgM: differences in antibody tests and correlation with clinical findings. *Neurol Sci* **41**(2); 365-372
- **Svahn J et al., 2018:** Anti-MAG antibodies in 202 patients: clinicopathological and therapeutic features. *J Neurol Neurosurg Psychiatry* **89**(5): 499-505.

“Patients with anti-MAG Neuropathy can be grouped were grouped categories into different categories. Basis is the titre of anti-MAG autoantibodies which can be determined by Autoantibody ELISA by BÜHLMANN. Clinical response to rituximab during 6-month and/or 7–12-month follow-up period was observed in 31.5% of patients and correlated with anti-MAG autoantibody titre of $\geq 10\ 000$ BTU.

- **Garg N et al., 2018:** Anti-MAG neuropathy: role of IgM antibodies, the paranodal junction and juxtaparanodal potassium channels. *Clin Neurophysiol* **129**(10): 2162-2169
doi: 10.1016/j.clinph.2018.07.021. Epub **2018** Aug 10.
- **Briani C et al., 2018:** Obinuzumab, a new anti-CD20 antibody, and Chlorambucil are active and effective in anti-MAG antibody polyneuropathy. *Eur J Neurol* **26**(2): 371-375
- **Falzone YM et al., 2018:** Functioning and quality of life in patients with neuropathy associated with anti-MAG antibodies; *J Neurol.* **265**(12): 2927-2933
- **D'Sa S et al., 2017:** Investigation and Management of IgM and Waldenström-associated peripheral neuropathies: recommendations from the IWWM-8 consensus panel. *Brit J Haematol* **176**(5): 728-742
- **Campagnolo M et al., 2017:** IgM MGUS and Waldenström-associated anti-MAG neuropathies display similar response to rituximab therapy. *J Neurol Neurosurg Psychiatry* **88**(12): 1094-1097
- **Nobile-Orazio E et al., 2017:** Comparing treatment options for chronic inflammatory neuropathies and choosing the right treatment plan. **17**(8): 755-765.
- **Lozeron P et al., 2016:** Is distal motor/or sensory demyelination a distinctive feature of anti-MAG neuropathy? *J. Neurol* **263**: 1761-1770

- **Magy L et al., 2015:** Heterogeneity of Polyneuropathy Associated with Anti-MAG Antibodies. J Immunol Res; **2015:** 450391.

“BÜHLMANN anti-MAG ELISA is described as a reliable quantitative tool to differentiate anti-MAG neuropathy into typical anti-MAG neuropathy and high titres of anti-MAG antibodies and CIDP-like neuropathy, negative Immune fluorescence (IF) results and low BTU titres.”

- **Stork A C J et al., 2014:** Prevalence, specificity and functionality of anti-ganglioside antibodies in neuropathy associated with IgM monoclonal gammopathy. J Neuroimmunol **268**(1-2): 89-94.

“Increase of sensitivity and determination by co-measurement of anti-MAG with -ganglioside antibodies, in patients with demyelinating neuropathies and IgM monoclonal antibodies (IgM-PNP).

- **Willison H J et al., 2011:** Use of antibody testing in nervous system disorders. European Handbook of Neurological Management: volume 1, 2nd edition; chapter **6:** 75-80.

“The article evaluates service provision and quality assurance schemes for clinically useful autoantibody test in neurology. ELISA is a widely used technique for the determination of anti-glycolipid antibodies and anti-MAG autoantibody ELISA “has good standardisation.”

- **Kuijf M et al., 2009:** Detection of anti-MAG antibodies in polyneuropathy associated with IgM monoclonal gammopathy. Neurology **73**(9): 688-695.

“Excellent differentiation between healthy subjects and patients with a demyelinating neuropathy with immunoglobulin M (IgM) monoclonal gammopathy (IgM-PNP) with an area under the curve of 0.84”

- **Renaud S et al., 2003:** Rituximab in the treatment of polyneuropathy associated with anti-MAG antibodies. Muscle Nerve **27**(5): 611-615.

“Monitoring Rituximab treatment is an important tool for patient management. During successful treatment, the measurement of anti-MAG autoantibodies by the BÜHLMANN assay shows significant decrease allowing follow-up of patients in therapy.”

Posters:

- **Castelani F et al., 2019:** Ibrutinib in Neuropathy with anti-Myelin-Associated Glycoprotein (MAG) Antibody. “Peripheral Nerve Society” (PNS) Annual Meeting **2019** in Genova (IT)
- **Greco N et al., 2019:** Small Fiber involvement in anti-MAG demyelinating neuropathy – data from a small cohort. Peripheral Nerve Society” (PNS) Annual Meeting **2019** in Genova (IT)
- **Herrendorff R et al., 2018:** Novel treatment opportunity for anti-myelin-associated glycoprotein neuropathy. Poster presented at **2018** “Peripheral Nerve Society” (PNS) Annual Meeting in Baltimore, MY (USA)
- **Delmont E et al., 2017:** Value of anti-HNK-1 Antibodies in anti-MAG Neuropathies: an analysis of 144 sera. Poster presented at **2017** “Peripheral Nerve Society” (PNS) Annual Meeting in Sitges (ES)

“Anti-MAG Antibodies have good sensitivity and specificity to detect anti-MAG Neuropathy. Notably, titres of anti-HNK-1 antibodies are related to the disease activity”

- **Camdessanché JP et al., 2017:** Therapeutic Management in 202 Patients. Poster presented at **2017** “Peripheral Nerve Society” (PNS) Annual Meeting in Sitges, (ES)
- **Neil J et al., 2017:** Do anti-MAG titers have a good correlation with clinical status in IgM anti-MAG Neuropathy? Poster presented at **2017** “Peripheral Nerve Society” (PNS) Annual Meeting in Sites, (ES)

further literature citing anti-MAG Autoantibodies ELISA by BÜHLMANN

- **Herrendorff R et al., 2017:** Selective in vivo removal of pathogenic anti-MAG autoantibodies, an antigenspecific treatment option for anti-MAG neuropathy. PNAS, www.pnas.org/cgi/doi/10.1073/pnas.1619386114
- **Baron M et al., 2017:** Plasma exchanges for acute neurological deterioration in patients with IgM anti-myelin-associated glycoprotein (anti-MAG) neuropathy. Journal of Neurology , **264**(6): 1132-1135
- **Doneddu P E et al., 2017:** Deterioration of tremor after treatment with rituximab in anti-MAG neuropathy(Letter to the Editor) Journal of the Neurological Sciences **373**: 344-345
- **Gesquière-Dando A et al., 2017:** Are electrophysiological features related to disability in patients with anti-MAG neuropathy? Clinical Neurophysiology **47**: 75-81
- **Gazzola S et al., 2017:** Predictive factors of efficacy of rituximab in patients anti-MAG neuropathy; Journal of the Neurological Sciences **377**: 144-148
- **Fatehi F et al., 2017:** Motor unit number index (MUNIX) in patients with anti-MAG neuropathy; Clinical Neurophysiology. doi: <http://dx.org/10.1016/j.clinph.2017.04.022>
- **Campagnolo M et al., 2017:** IgM MGUS and Waldenstrom-associated anti-MAG neuropathies display similar response to rituximab therapy. J Neurol Neurosurg Psychiatry **88**(12): 1094-1097
- **Gomez A and Hoffman J E, 2016:** Anti Myelin-Associated-Glycoprotein Antibody Peripheral Neuropathy Response to Combination Chemoimmunotherapy with Bendamustine/Rituximab in a Patient With Biclinal IgM κ and IgM λ : Case Report and Review of the Literature. Clin Lymphoma Myeloma Leuk **16**(7): e101-108.
- **Stork A C J et al., 2016:** Classical and lectin complement pathway activity in polyneuropathy associated with IgM monoclonal gammopathy. J Neuroimmunol **290**: 76-79
- **Ferfaglia R I et al., 2016:** Long-term efficacy of rituximab in IgM anti-myelin-associated glycoprotein neuropathy: RIMAG follow-up study. J Peripher Nerv Syst **21**(1): 10-14
- **Campagnolo M et al., 2015:** Polyneuropathy with anti-sulfatide and anti-MAG antibodies: clinical, neurophysiological, pathological features and response to treatment. J Neuroimmunol **281**: 1-4
- **Stork A C J et al., 2014:** Clinical phenotype of patients with neuropathy associated with monoclonal gammopathy: a comparative study and a review of the literature. J Neurol **261**(7): 1389-1404
- **Sala E et al., 2014:** Acute neurological worsening after Rituximab treatment in patients with anti-MAG neuropathy. J Neurol Sci **345**(1-2):224-227

- **Bridel C et al., 2014:** Multifocal motor neuropathy with high titers of anti-MAG antibodies. *J Peripher Nerv Syst* **19**(2): 180-182
- **Hospital M A et al., 2013:** Immunotherapy-based regimen in anti-MAG neuropathy: results in 45 patients. *Haematologica* **98**(12): e155-157
- **Piscosquito G et al., 2013:** Coexistence of Charcot-Marie-Tooth disease type 1A and anti-MAG neuropathy. *J Peripher Nerv Syst* **18**(2): 185-188
- **Stork A C J et al., 2013:** Rapid worsening of IgM anti-MAG demyelinating polyneuropathy during rituximab treatment. *J Peripher Nerv Syst* **18**(2): 189-192
- **Pihan M et al., 2012:** [Neuropathies associated with monoclonal IgM anti-MAG antibodies]. *Rev Med Interne*; **33**(12): 686-692
- **Maurer M A et al., 2012:** Rituximab induces sustained reduction of pathogenic B cells in patients with peripheral nervous system autoimmunity. *J Clin Invest* **122**(4):1393-1402
- **Mostafa G A et al., 2012:** Reduced serum concentrations of 25-hydroxy vitamin D in children with autism: relation to autoimmunity. *J Neuroinflammation* **17**(9): 201
- **Zara G et al., 2011:** Neurophysiological and clinical responses to rituximab in patients with anti-MAG polyneuropathy. *Clin Neurophysiol* **122**(12): 2518-2522
- **Matà S et al., 2011:** Anti-myelin associated glycoprotein antibodies recognize HNK-1 epitope on CNS. *J Neuroimmunol* **236**(1-2): 99-105
- **Larue S et al., 2011:** Non-anti-MAG DADS neuropathy as a variant of CIDP: clinical, electrophysiological, laboratory features and response to treatment in 10 cases. *Eur J Neurol* **18**(6): 899-905
- **Matà S et al., 2011:** IgM monoclonal gammopathy-associated neuropathies with different IgM specificity. *Eur J Neurol* **18**(8): 1067-1073
- **Jurici S et al., 2011:** An Autopsy Case of Amyotrophic Lateral Sclerosis with Waldenstrom Macroglobulinemia and Anti-MAG Gammopathy. *Case Rep Neurol* **3**(3): 294-400
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- **Kvarnström M et al., 2002:** Myelin protein P0-specific IgM producing monoclonal B cell lines were established from polyneuropathy patients with monoclonal gammopathy of undetermined significance (MGUS). *Clin Exp Immunol* **127**(2): 255-262

BÜHLMANN anti-SGPG Autoantibodies ELISA

- **Herrendorff R et al., 2017:** Selective *in vivo* removal of pathogenic anti-MAG autoantibodies, an antigen specific treatment option for anti-MAG neuropathy. *PNAS*, www.pnas.org/cgi/doi/10.1073/pnas.1619386114
- **Caudie C et al., 2007:** [Diagnostic value of the anti-IgM SGPG Elisa (BÜHLMANN Laboratories AG) in 147 sera with a monoclonal IgM anti-MAG/SGPG antibody-associated neuropathy]. *Ann Biol Clin (Paris)* **65**(4): 369-375

“The anti-SGPG autoantibody ELISA by BÜHLMANN turned out to be a very reliable commercially available test with no technical difficulties and both, excellent sensitivity (0.98), and specificity (0.98) for detecting MAG/SGPG antibody-mediated demyelinating neuropathies. Anti-SGPG antibody titers have practical implications for both, management and follow-up of neuropathies treated with rituximab.”

- **Bridel C et al., 2014:** Multifocal motor neuropathy with high titres of anti-MAG antibodies. *J Peripher Nerv Syst* **19**(2): 180-182
- **Kuijf M et al., 2009:** Detection of anti-MAG antibodies in polyneuropathy associated with IgM monoclonal gammopathy. *Neurology* **73**(9): 688-695