Neuroimmunology: BÜHLMANN neural antibody ELISAs in the Literature – 60 References: most cited neural antibody assays

BÜHLMANN GanglioCombi® ELISAs

- **Del mont E et al., 2017**: Value of anti-HNK-1 Antibodies in anti-MAG Neuropathies: an analysis of 144 sera
  Poster presented at 2017 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.

  "BÜHLMANN GanglioCombi ELISA compared to competitor Assays has best performance and qualifies for Assay of choice for daily clinical routine application."

- **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.


  "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."

Further literature citing BÜHLMANN GanglioCombi® ELISA/anti-GM1 Autoantibodies ELISA


- **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

- Han T A et al., 2016: Transient Isolated Lower Bulbar Palsy with Elevated Serum Anti-GM1 and Anti-GD1b Antibodies During Aripiprazole Treatment. Pediatr Neurol 66; 96-99.


- 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


- Wurster U et al., 2009: Ganglioside Antibodies in Amyotrophic Lateral Sclerosis. Poster presented at DAS, Dresden (GE).

**BÜHLMANN anti-MAG Autoantibodies ELISA**


"Patients with anti-MAG Neuropathy can be grouped 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 ≥ 10 000 BTU."


"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."


"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)."
BÜHLMANN neural antibody ELISAs in the Literature – 6/2018


  “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”


  “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.”

**Further literature citing anti-MAG Autoantibodies ELISA by BÜHLMANN**


- **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; 0:1-3. doi:10.1136/jnnp-2017-315736

- **Lozeron P et al., 2016**: Is distal motor and/or sensory demyelination a distinctive feature of anti-MAG neuropathy? Journal of Neurology 263: 1761-1770

• **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

• **Ferfoglia 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 Neuroimmunol **21** (7): 1389-1404


• **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., 2011**: Reduced serum concentrations of 25-hydroxy vitamin D in children with autism: relation to autoimmunity. J Neuroinflammation **17**(9): 201

• **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


• **Théaudin M** et al., 2011: Short and long-term effect of IVIg in demyelinating neuropathy associated with MGUS, experience of a monocentric study, Rev Neurol (Paris) 167(12): 897-904

• **Delmont E** et al., 2011: Treatment with rituximab in patients with polyneuropathy with anti-MAG antibodies. J Neurol 258(9): 1717-1719


• **Steck A** et al., 2006: Anti-myelin-associated glycoprotein neuropathy. Curr Opin Neurol; 19(5): 458-463


• **Caudie C** et al., 2006: [Diagnostic value of autoantibodies to MAG by ELISA Bühmann in 117 immune-mediated peripheral neuropathies associated with monoclonal IgM to SGPG/SGLPG]. Ann Biol Clin 64(4): 353-359

• **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**


• **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.”


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