BLOT

DotDiver Anti-Gangliosid IgG/IgM/screen

LINE Immunoassays for the qualitative determination of IgG and / or IgM antibodies against gangliosides in human serum

Generic Assays

Product Highlights

- Serological marker for autoimmune polyneuropathies
- Diagnostic efficiency through profile diagnostics with 12 antigens
- Automated performance with the DotDiver2.0

Antibodies against gangliosides

and their significance in the diagnosis of peripheral neuropathies

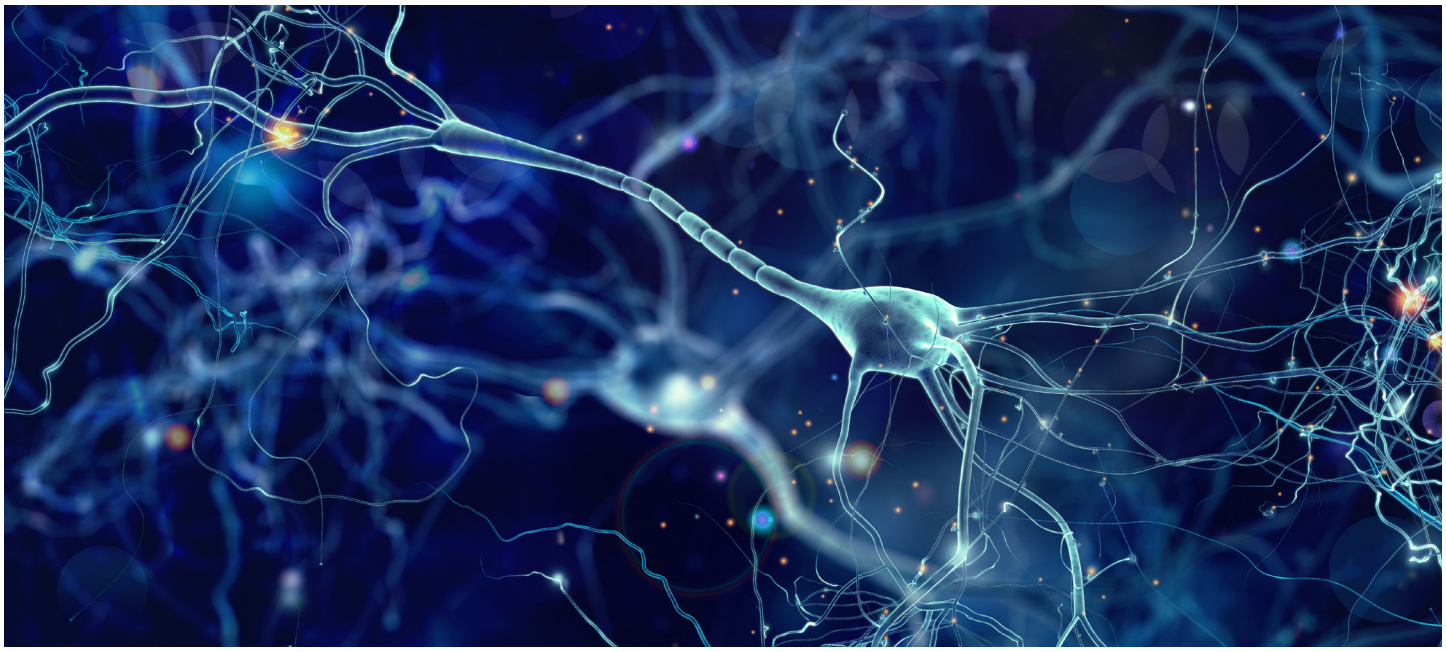
Peripheral neurological diseases

Inflammatory neuropathies of the peripheral nervous system are characterized by numerous clinical symptoms that can range from mild fatigue and uncharacteristic discomfort to neuro-muscular disorders and functional deficits such as respiratory paralysis and cardiac arrest. The inflammation affects the myelin layer (demyelination) or the nerve fiber (axonal disorder).

Autoantibodies against gangliosides have been increasingly identified in diseases of the peripheral nervous system. Gangliosides are acidic glycolipids consisting of a lipid (ceramide) and an oligosaccharide chain containing one or more sialic acid(s). Gangliosides are components of cell membranes and are also found particularly in the central and peripheral nervous system. Ganglioside-like structures have been also identified on the surface of microorganisms. Inflammatory neuropathies often occur as a result of an infection. Antibodies against ganglioside structures of pathogens can cross-react with gangliosides of myelin sheaths or nerve fibers and cause inflammatory processes.

Antibodies against gangliosides

Antibodies against gangliosides are serological markers for idiopathic or post-infectious neurological diseases. The distribution of gangliosides in nerve tissue varies. Antibodies against the respective gangliosides are therefore found in various clinical pictures of peripheral polyneuropathies. The diagnostic significance also extends to the isotype of the identified antibodies. IgG antibodies are predominantly found in acute forms, while IgM antibodies may indicate the presence of chronic polyneuropathy.



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Line immunoassays for the determination of antibodies against gangliosides in human serum

Autoimmune neuropathies

Autoimmune neuropathies of the peripheral nervous system are characterized by numerous clinical symptoms which, however, do not differ from those of other neuropathies. Neuropathies of auto-immune origin (13% of all neuropathies) can therefore be misdiagnosed as idiopathic and thus in-correctly treated. The determination of anti-ganglioside antibodies can therefore contribute to the diagnosis of this group of diseases.

	Sulf	GM1	GM2	GM3	GM4	GD1a	GD1b	GD2	GD3	GT1a	GT1b	GQ1b
GBS /AIDP		IgG			IgM	IgG	IgG				IgG	
GBS/AMAN & AMSAN	IgM	IgG			IgM	IgG	IgG				IgG	
GBS after CMV-Infection		IgM	IgM			IgM	IgM					
GBS with ataxia							IgG			IgG		IgG
GBS with ONS		IgG				IgG				IgG		IgG
GBS with ophthalmoplegia										IgG		IgG
MFS					IgM		IgG		IgG	IgG	IgG	IgG
Bickerstaff encephalitis										IgG		IgG
CANOMAD				IgM		IgM	IgM	IgM	IgM	IgM	IgM	IgM
MMN		IgM	IgM	IgM	IgM	IgM	IgM					
CIDP	IgM	IgM	IgM	IgM		IgM	IgM					
MN with gammopathy	IgM	IgM					IgM					

AIDP - acute inflammatoric demyelinating polyneuropathy, AMAN - acute motor axonal neuropathy, AMSAN - acute motor and sensory axonal neuropathy, CANOMAD -chronic ataxic neuropathy ophthalmoplegia IgM paraprotein cold agglutinins disialosyl antibodies, CIDP - chronic inflammatoric demyelinating polyneuropathy, CMV -cytomegalovirus, GBS - Guillain-Barré syndrome, MFS - Miller Fisher syndrome, MMN - multifocal motor neuropathy with conduction blocks, MN - motor neuropathy, ONS -acute paralysis of the oropharyngeal neck and shoulder muscles. Adapted from Conrad et al. 2011.

Publications

- Willison HJ, Yuki N: Peripheral neuropathies and anti-glycolipid antibodies. Brain, 2002, 125, 2591 – 625
- Khalili-Shirazi A, Gregson N, Gray I, Rees J, Winer J, Hughes R: Antiganglioside antibodies in Gulain-Barre syndrome after a recent cytomegalovirus infection, J. Neurol. Neurosurg. Psychiatry, 1999, 66, 376 – 9.
- Schwerer B, Neisser A, Bernheimer H: Distinct immunoglobulin class and immunoglobulin G subclass patterns against ganglioside GQ1b in Miller Fisher syndrome following different types of infection. Infect. Immun. 1999, 67, 2414 – 21.
- Caudie C, Quittard Pinon A, Bouhour F, Vial C, Garnier L, Fabien N. Comparison of commercial tests for detecting multiple anti-ganglioside autoantibodies in patients with well-characterized immune-mediated peripheral neuropathies.Clin Lab, 2013, 59, (11-12), 1277- 87.

Anti-Gangliosid Assays for

DotDiver2.0

Automated Immunoblot Analyzer

- Automated LINE / Dot immunoblot benchtop analyzer with small footprint
- User-friendly software
- Simultaneous performance of up to 24 different tests
- Ready-to-use reagents and test strips
- Automated barcode identification of test strips and cartridges
- Integrated drying of processed test strips
- Evaluation of processed test strips
- Export of results in digital file format or as print out
- LIS connectivity
- Low-maintenance, no liquid handling

Product Information

DotDiver2.0 Tests

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Order Information

DotDiver Anti-Gangliosid IgG (24 x 12 Determinations)	**REF 50381**
DotDiver Anti-Gangliosid IgM (20 x 12 Determinations)	**REF 50391**
DotDiver Anti-Gangliosid screen (20 x 12 Determinations)	**REF 50301**

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