

# anti-SGPG autoantibodies ELISA

anti-Sulfate-3-Glucuronyl Paragloboside

Quality Controlled,  
CE marked  
Assay

"SGPG is the most prominent of several sulphated glycolipids in the PNS that share a carbohydrate epitope with MAG and react monoclonal IgM anti-MAG antibodies in patients with demyelinating Neuropathy associated with gammopathy."

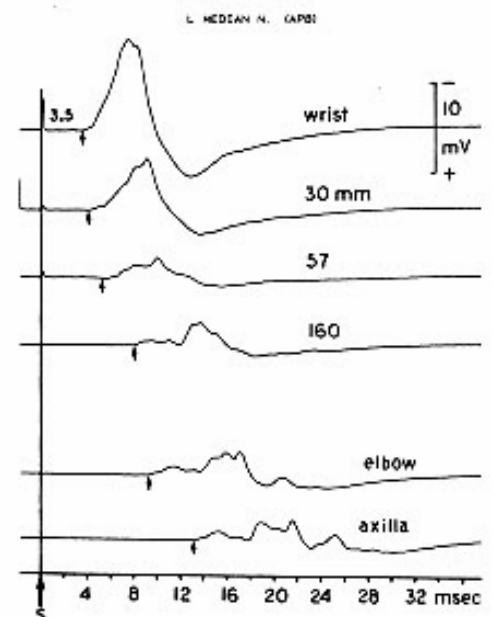
Quarles RH and Weiss MD, Muscle and Nerve (1999)

"There are sensory demyelinating neuropathies without MAG antibodies and with anti-SGPG antibodies."

Baumann N, Clin Rev in Allergy & Immunol (2000)



- **Confirm & establish a diagnosis of Neuropathy**
- **Discriminate between Neuropathies and other etiologies**
- **Evaluate the chances of successful therapy**



# anti-SGPG autoantibody EIA

## Standardization:

The anti-SGPG EIA kit is calibrated against an internal reference pool of diluted positive sera in the range between positive and negative values.

The results are expressed as a Ratio from the sample absorbance to the absorbance of the calibrator.

## Proposed Cut-Off Value Ratio >1

199/200 normal blood donors showed ratio <1

## Intra-assay Precision 4.9 %

mean CV; mean value of mid and high titer sera

## Inter-assay Precision 10.0 %

mean CV; mean value of low and high titer sera

## Dilution/Linearity Parallelism: 154 %

n = 13; diluted from 1:1000 to 1:128000

## Analytical Sensitivity: Ratio <0.01

## Functional Sensitivity: Ratio <0.15

## Sample Size/Type: < 50 µl Serum

## Sample Storage and Stability: -20°C for at least 1 year

Sulfate-3-glucuronyl paragloboside (SGPG) is a member of the family of the glycosphingolipids (e.g. gangliosides) and reacts with the HNK-1/L1 family (e.g. MAG, P0, etc.) of antibodies. SGPG is believed to function in adhesion and cell-cell interaction.


Monoclonal and polyclonal antibodies from neuropathy patients have been shown to react with sulfated glycoconjugate antigens from SGPG as well as with Myelin associated glycoprotein (MAG) which shares the same epitopes in the carbohydrate part of the molecule. There exists a substantial variation among patients with regard to the relative strengths with which their antibodies bind to the different glycoconjugates.

Whereas MAG is restricted to the periaxonal Schwann-cell membranes, SGPG has a wider distribution, being present both in Schwann-cell and neuronal membranes, including myelin and the axolemma, as well as in neural endothelial cells.


The relative differences among patients with regard to strength of antibody reactivity with these potential glycoconjugate targets could contribute to some of the clinical heterogeneity observed in peripheral neuropathy.

After RH Quarles and MD Weiss  
Muscle and Nerve (1999)


## Precoated Microtiter Plate

 wash 4 x


add 100 µl of Calibrator, Controls and Serum Samples (diluted 1:1000)

 incubate 2 hours at 2-8°C  
wash 4 x

add 100 µL Enzyme Label

 incubate 2 hours at 2-8°C  
wash 4 x

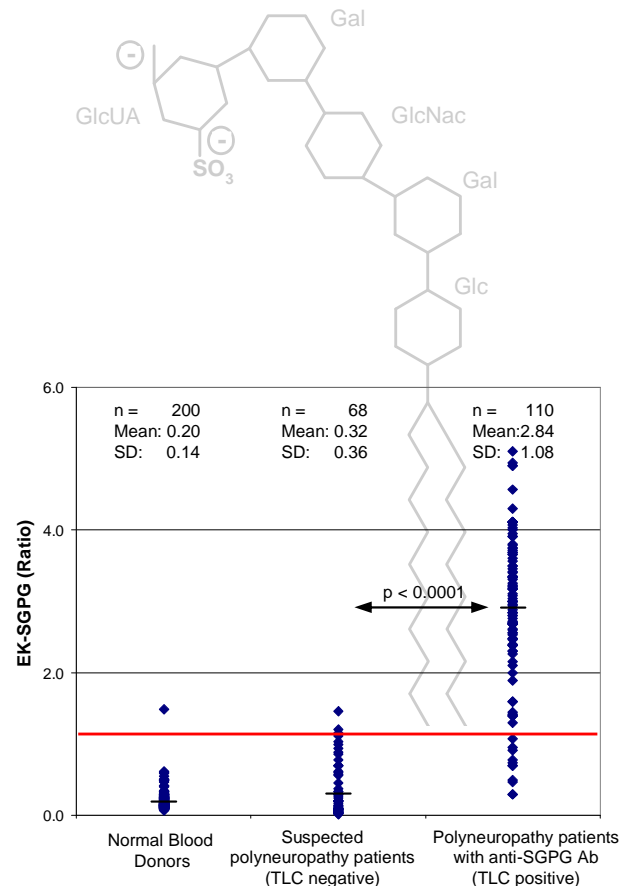
add 100 µL TMB Substrate

 incubate 30 min at 18-28°C  
on a plate rotator

add 100 µl Stop Solution

Read absorbance at 450 nm within 30 minutes

**TIME to RESULT: 4.5 hours**



200 normal Blood donors were tested with the EK-SGPG. Additionally, a total of 178 sera from patients with suspected polyneuropathy were tested with thin layer chromatography (TLC) and with the EK-SGPG. A (red line: Cut-off value Ratio >1).

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**Order code:**  
anti-SGPG EIA

EK-SGPG (96 wells)

**Related Products:**

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