



Catalog Number: 13186-H02H

General Information

Gene Name Synonym:

GMA; S-MAG; SIGLEC-4A; SIGLEC4A; Gma; siglec-4a

Protein Construction:

A DNA sequence encoding the human MAG (P20916-1) (Met1-Pro516) was expressed with the Fc region of human IgG1 at the C-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Gly 20

Molecular Mass:

The recombinant human MAG/Fc is a disulfide-linked homodimer. The reduced monomer comprises 738 amino acids and has a predicted molecular mass of 81.7 kDa. The apparent molecular mass of the protein is approximately 113 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

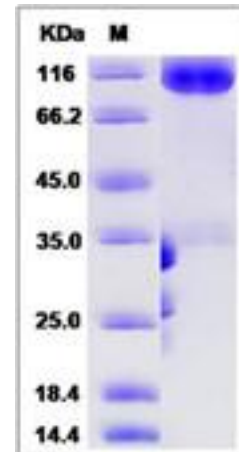
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

The myelin-associated glycoprotein (MAG) contains five immunoglobulin-like domains and belongs to the sialic-acid-binding subgroup of the Ig superfamily. MAG is a transmembrane glycoprotein of 100kDa localized in myelin sheaths of periaxonal Schwann cell and oligodendroglial membranes where it functions in glia-axon interactions. It appears to function both as a receptor for an axonal signal that promotes the differentiation, maintenance and survival of oligodendrocytes and as a ligand for an axonal receptor that is needed for the maintenance of myelinated axons. MAG contains a carbohydrate epitope shared with other glycoconjugates that is a target antigen in autoimmune peripheral neuropathy associated with IgM gammopathy and has been implicated in a dying back oligodendroglialopathy in multiple sclerosis. MAG is considered as a transmembrane protein of both CNS and PNS myelin and it strongly inhibits neurite outgrowth in both developing cerebellar and adult dorsal root ganglion neurons. In contrast, MAG promotes neurite outgrowth from newborn DRG neurons. Thus, MAG may be responsible for the lack of CNS nerve regeneration and may influence both temporally and spatially regeneration in the PNS.

References

- 1.Quarles RH. (2007) Myelin-associated glycoprotein (MAG): past, present and beyond. J Neurochem. 100(6):1431-48.
- 2.Mukhopadhyay G, *et al.* (1994) A novel role for myelin-associated glycoprotein as an inhibitor of axonal regeneration. Neuron. 13(3): 757-67.
- 3.Barton DE, *et al.* (1987) The myelin-associated glycoprotein gene: mapping to human chromosome 19 and mouse chromosome 7 and expression in quivering mice. Genomics. 1(2): 107-12.