MAG/Siglec-4a Protein, Human (HEK293, Fc)

Cat. No.:	HY-P73833
Synonyms:	Myelin-Associated Glycoprotein; Siglec-4a; MAG; GMA
Species:	Human
Source:	HEK293
Accession:	P20916 (M1-P516)
Gene ID:	4099
Molecular Weight:	Approximately 113 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	The MAG/Siglec-4a protein serves as an adhesion molecule facilitating interactions between myelinating cells and neurons by binding to neuronal sialic acid-containing gangliosides, as well as the glycoproteins RTN4R and RTN4RL2. Although not essential for initial myelination, MAG/Siglec-4a appears to play a crucial role in maintaining normal axon myelination and protecting motoneurons against apoptosis, particularly after injury. This protective effect is likely mediated through interactions with neuronal RTN4R and RTN4RL2. In adults, MAG/Siglec-4a is required to prevent degeneration of myelinated axons, possibly relying on binding to gangliosides on the axon cell membrane. Acting as a negative regulator of neurite outgrowth, MAG/Siglec-4a inhibits axon longitudinal growth and outgrowth by preferentially binding to alpha-2,3-linked sialic acid and interacting with RTN4R, RTN4RL2, and gangliosides. The protein exists as both a monomer and homodimer, and its interactions extend to include isoform 2 of BSG, contributing to its intricate role in modulating neuronal responses and axonal dynamics.

Caution: Product has not been fully validated for medical applications. For research use only.

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