

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

<b>Cat. No.:</b>	HY-P70318
<b>Synonyms:</b>	rHuMyelin-associated glycoprotein/MAG, His; Myelin-Associated Glycoprotein; Siglec-4a; MAG; GMA
<b>Species:</b>	Human
<b>Source:</b>	HEK293
<b>Accession:</b>	P20916 (G20-P516)
<b>Gene ID:</b>	4099
<b>Molecular Weight:</b>	84-108 kDa

### PROPERTIES

#### AA Sequence

GHWGAWMPSS	ISAFEGTCVS	IPCRFDFPDE	LRPAVVHGVW
YFNSPYPKNY	PPVVFKSRTQ	VVHESFQGRS	RLLGDLGLRN
CTLLLSNVSP	ELGGKYYFRG	DLGGYNQYTF	SEHSVLDIVN
TPNIVVPPEV	VAGTEVEVSC	MVPDNCPELR	PELSWLGHEG
LGEPAVLGR	REDEGTWVQV	SLLHFVPTRE	ANGHRLGCQA
SFPNTTLQFE	GYASMDVKYP	PVIVEMNSSV	EAIEGSHVSL
LCGADSNPPP	LLTWMRDGTV	LREAVAESLL	LELEEVTPAE
DGVYACLAEN	AYGQDNRTVG	LSVMYAPWKP	TVNGTMVAVE
GETVSI LCST	QSNPDPILTI	FKEKQILSTV	IYESELQLEL
PAVSPEDDGE	YWCVAENQYG	QRATAFNLSV	EFAPVLLLES
HCAAARDTVQ	CLCVVKSNEP	PSVAFELPSR	NVTVNESERE
FVYSERSGLV	LTSILTLRQG	AQAPPRVICT	ARNLYGAKSL
ELPFQGAHRL	MWAKIGP		

#### Appearance

Lyophilized powder.

#### Formulation

Lyophilized from a 0.2 µm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.2.

#### Endotoxin Level

<1 EU/µg, determined by LAL method.

#### Reconstitution

It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH<sub>2</sub>O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).

#### 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

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**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.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA