Data Sheet (Cat.No.TMPY-02525)

TargetMol

RGMA Protein, Human, Recombinant (His)

General Information

Synonyms:	repulsive guidance molecule family member a;RGM
Protein Construction:	A DNA sequence encoding the human RGMA isoform 3 (NP_064596.2) (Met 1-Gly 422), without the C-terminal pro peptide, was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Cys 48
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q96B86-1
Molecular Weight:	43 kDa (predicted); 36 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	≥ 90 % as determined by SDS-PAGE. ≥ 85 % as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

RGMa, also known as RGM domain family, member A, belongs to the RGM (repulsive guidance molecule) family whose members are membrane-associated glycoprotein. RGMa is a glycosylphosphatidylinositol-anchored glycoprotein that functions as an axon guidance protein in the developing and adult central nervous system. It helps guide Retinal Ganglion Cell (RGC) axons to the tectum in the midbrain. RGMa has been implicated to play an

important role in the developing brain and in the scar tissue that forms after a brain injury. This protein may also function as a tumor suppressor in some cancers.

Reference

Severyn CJ,et al.(2009). Molecular biology, genetics and biochemistry of the repulsive guidance molecule family. Biochem J. 422 (3): 393-403.

Monnier PP,et al.(2002) RGM is a repulsive guidance molecule for retinal axons. Nature. 419: 392-5.

Matsunaga E,et al.(2004) RGM and its receptor neogenin regulate neuronal survival. Nature Cell Biology. 6: 749-55.

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