Data Sheet (Cat.No.TMPK-01232)

TargetMol

PLXNA1 Protein, Human, Recombinant (His)

General Information

Synonyms:	Plexin A1, Semaphorin receptor NOV, NOV, PLXN1
Protein Construction:	Glu27-Pro1244
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9UIW2
Molecular Weight:	135 kDa (predicted). Due to glycosylation, the protein migrates to 140-155 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by 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, 8% trehalose is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

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

PLXNA1 (Plexin A1) is a member of plexin family that are the receptors of semaphorins. It is involved in cell migration and neuronal repulsion by affecting cytoskeletal remodeling. PLXNA1 can bind class 6 semaphorins and bind the class 3 semaphorins indirectly via Neuropilin-1 and -2.

Reference

Kumanogoh A, Kikutani H. Immunological functions of the neuropilins and plexins as receptors for semaphorins. Nat Rev Immunol. 2013 Nov;13(11):802-14. doi: 10.1038/nri3545. PMID: 24319778.

Christie SM, et al. Interactions between semaphorins and plexin-neuropilin receptor complexes in the membranes of live cells. J Biol Chem. 2021 Aug;297(2):100965. doi: 10.1016/j.jbc.2021.100965. Epub 2021 Jul 13. PMID: 34270956; PMCID: PMC8350011.

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