Data Sheet (Cat.No.TMPY-02126)

TargetMol

OMGP Protein, Mouse, Recombinant (aa 1-245, His)

General Information

Synonyms:	oligodendrocyte myelin glycoprotein
Protein Construction:	A DNA sequence encoding the amino acids (Met 1-Thr 245) of mouse OMGP (Q63912) was expressed, with a C-terminal polyhistidine tag. Predicted N terminal: Ile 25
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q63912
Molecular Weight:	27 kDa (predicted); 44 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:	> 95 % as determined by SDS-PAGE
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:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

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

Oligodendrocyte-myelin glycoprotein, also known as OMG and OMGP, is a cell membrane protein that contains eight LRR (leucine-rich) repeats. OMG / OMGP is a glycosylphosphatidylinositol-anchored protein expressed by neurons and oligodendrocytes in the central nervous system (CNS). OMG / OMGP is a cell adhesion molecule contributing to the interactive process required for myelination in the central nervous system. OMG / OMGP play roles in both the developing and adult central nervous system. OMG / OMGP participates in growth cone collapse

and inhibition of neurite outgrowth through its interaction with NgR, the receptor for Nogo. This function requires its leucine-rich repeat domain, a highly conserved region in OMgp during mammal evolution. OMG / OMGP leucine-rich repeat domain is also implicated in the inhibition of cell proliferation. OMG / OMGP may also be involved in the formation and maintenance of myelin sheaths. Cell proliferation, neuronal sprouting, and myelination are crucial processes involved in brain development and regeneration after injury.

Reference

Viskochil D.,et al.,(1991), The gene encoding the oligodendrocyte-myelin glycoprotein is embedded within the neurofibromatosis type 1 gene. Mol. Cell. Biol. 11:906-912.

Mikol D.D.,et al., (1990), The oligodendrocyte-myelin glycoprotein belongs to a distinct family of proteins and contains the HNK-1 carbohydrate.J. Cell Biol. 110:471-479.

Mikol D.D.,et al.,(1990), Structure and chromosomal localization of the gene for the oligodendrocyte-myelin glycoprotein.J. Cell Biol. 111:2673-2679.