Data Sheet (Cat.No.TMPK-01069)

TargetMol

TMEM106B Protein, Mouse, Recombinant (hFc)

General Information

Synonyms:	Transmembrane protein 106B;Tmem106b
Protein Construction:	Pro119-Gln275
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q80X71
Molecular Weight:	44.8 kDa (predicted). Due to glycosylation, the protein migrates to 65-68 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

TMEM106B is a well-recognised risk factor for FTD caused by GRN mutation. Elegant experiments have suggested that increased risk for FTD is due to elevated levels of TMEM106B (Nicholson et al, 2013; Gallagher et al, 2017). Therefore, recent work has explored the therapeutic potential of reducing TMEM106B levels, with initial results looking encouraging, as crossing a Grn-deficient mouse to a Tmem106b knockout showed a rescue in FTD-related behavioural defects and specific aspects of lysosome dysfunction (Klein et al, 2017).

Reference

Clayton EL, Isaacs AM. Progranulin and TMEM106B: when two become wan. EMBO Rep. 2020 Oct 5;21(10):e51668. doi: 10.15252/embr.202051668. Epub 2020 Sep 28. PMID: 32985120; PMCID: PMC7534635.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481