Data Sheet (Cat.No.TMPY-03857)

TargetMol

MMGT1 Protein, Human, Recombinant (His)

General Information

Synonyms:	membrane magnesium transporter 1;TMEM32;EMC5
Protein Construction:	A DNA sequence encoding the human MMGT1 (NP_775741.1) (Glu66-Arg131) was expressed with an N-terminal polyhistidine tag. Predicted N terminal: His
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q8N4V1-1
Molecular Weight:	10.1 kDa (predicted); 23-29 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

MMGT1 (Membrane Magnesium Transporter 1, also known as EMC5 and TMEM32) is a Protein Coding gene. 2 alternatively spliced human isoforms have been reported. The encoded protein belongs to the membrane magnesium transporter (TC 1.A.67) family which is a group of magnesium transporters that are part of the TOG superfamily. It mediates Mg(2+) transport. MMGT1 is described as having 335 amino acids and five TMSs with an N-terminal cleavage site and some phosphorylation sites. It is widely expressed in the thyroid, bone marrow, and

other tissues. Diseases associated with MMGT1 include Cercarial Dermatitis. Among its related pathways are the Transport of glucose and other sugars, bile salts and organic acids, metal ions and amine compounds, and Miscellaneous transport and binding events.

Reference

Goytain A. et al., 2008, Am J Physiol Cell Physiol. 294 (2): C495-502.
Briers TW. et al., 1994, J Neuroimmunol. 52 (2): 153-64.
Jäger S. et al., 2011, Nature. 481 (7381): 365-70.

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