Data Sheet (Cat.No.TMPY-03365)

TargetMol

TMEM27 Protein, Human, Recombinant (His)

General Information

Synonyms:	transmembrane protein 27;NX-17;NX17
Protein Construction:	A DNA sequence encoding the human TMEM27 (NP_065716.1) (Met1-Pro141) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Glu 15
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9HBJ8
Molecular Weight:	15.8 kDa (predicted); 27 and 33 kDa (reducing conditions)

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:	> 85 % 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

TMEM27 is a membrane protein. It has been proposed as a beta cell mass biomarker since it is cleaved and shed by pancreatic beta cells. Overexpression of TMEM27 leads to increased thymidine incorporation, whereas silencing of Tmem27 using RNAi results in a reduction of cell replication. Furthermore, transgenic mice with increased expression of Tmem27 in pancreatic beta cells exhibit increased beta cell mass. TMEM27 is also important for trafficking amino acid transporters to the apical brush border of proximal tubules.

Reference

Pasquali L,et al. (2009) Collectrin gene screening in Turner syndrome patients with kidney malformation. J Genet. 88(1):105-8.

Tosetto E,et al. (2009) Locus heterogeneity of Dent's disease: OCRL1 and TMEM27 genes in patients with no CLCN5 mutations. Pediatr Nephrol. 24(10):1967-73.

Singer D,et al. (2011) Collectrin and ACE2 in renal and intestinal amino acid transport. Channels (Austin). 5(5):410-23.

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