Data Sheet (Cat.No.TMPY-03409)

TargetMol

TSPAN1 Protein, Human, Recombinant (aa 110-211, rFc)

General Information

Synonyms:	tetraspanin 1;NET1;TSPAN1;TM4SF;TM4C
Protein Construction:	A DNA sequence encoding the human TSPAN1 (O60635)(Tyr110-Asn211) was expressed with the Fc region of rabbit IgG at the N-terminus. Predicted N terminal: Ser
Species:	Human
Expression Host:	HEK293 Cells
Accession:	O60635
Molecular Weight:	39.1 kDa (predicted); 43-53 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

TSPAN1 belongs to the transmembrane 4 superfamily, also known as the tetraspanin family. Tetraspanins have four hydrophobic domains, intracellular N- and C-termini and two extracellular domains. Tetraspanins act as scaffolding proteins, anchoring multiple proteins to one area of the cell membrane. They also mediate signal transduction events that play a role in the regulation of cell development, activation, growth and motility. TSPAN1 interacts with human thiamine transporter-1 (hTHTR-1). HTHTR-1 contributes to intestinal thiamine uptake, and its

function is regulated at both the transcriptional and posttranscriptional levels. TSPAN1 and hTHTR-1 colocalize in human intestinal epithelial HuTu-8 cells. Coexpression of TSPAN1 in these cells led to a significant decrease in the rate of degradation of hTHTR-1 compared with cells expressing the hTHTR-1 alone; in fact the half-life of the TSPAN1 protein was twice longer in the former cell type compared with the latter cell type.

Reference

Chen L. et al., 2010, J Korean Med Sci. 25 (10): 1438-42.
Chen L. et al., 2010, Tumori. 96 (5): 744-50.
Nabokina SM. et al., 2011, Am J Physiol Gastrointest Liver Physiol. 301 (5): G808-13.

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