Data Sheet (Cat.No.TMPY-02653)

TargetMol

LRP-10 Protein, Human, Recombinant (hFc)

General Information

Synonyms:	low density lipoprotein receptor-related protein 10;MST087;MSTP087;LRP9
Protein Construction:	A DNA sequence encoding the human LRP10 (Q7Z4F1-1) extracellular domain (Met 1-Lys 440) was fused with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: His 17
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q7Z4F1-1
Molecular Weight:	73 kDa (predicted); 80-90 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:	> 88 % 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

LRP10 (low-density lipoprotein Receptor Related Protein 10) is a Protein Coding gene. 2 alternatively spliced human isoforms have been reported. This gene encodes a low-density lipoprotein receptor family protein. A similar protein in mouse is thought to play a role in the uptake of apolipoprotein E-containing lipoproteins. Human LRP10 cDNA encodes a 1905 amino acid type I membrane protein consisting of five functional domains characteristic of the LDLR gene family. It is widely expressed in the esophagus, colon, and other tissues. LRP10

plays a significant role in brain physiology other than lipoprotein metabolism. It is associated with a series of neurodegenerative diseases, such as Alzheimer's disease and Parkinson's disease which share genetic risk factors and pathophysiological processes with amyotrophic lateral sclerosis (ALS).

Reference

Jeong YH, et al. (2010) The low-density lipoprotein receptor-related protein 10 is a negative regulator of the canonical Wnt/beta-catenin signaling pathway. Biochem Biophys Res Commun. 392(4): 495-9.
Beisiegel U, et al. (1991) Lipoprotein lipase enhances the binding of chylomicrons to low density lipoprotein receptor-related protein. Proc Natl Acad Sci U S A. 88(19): 8342-6.
Strickland DK, et al. (1990) Sequence identity between the alpha 2-macroglobulin receptor and low density lipoprotein receptor-related protein suggests that this molecule is a multifunctional receptor. J Biol Chem. 265(29): 17401-4.