Data Sheet (Cat.No.TMPY-06607)

TargetMol

MFI2 Protein, Human, Recombinant (His)

General Information

Synonyms:	MTF1;melanotransferrin;CD228;MTf;MAP97
Protein Construction:	A DNA sequence encoding the human MELTF (P08582-1) (Met1-Gln708) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Gly 20
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P08582-1
Molecular Weight:	77.47 kDa (predicted); 86.89 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:	> 90 % 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

MELTF (Melanotransferrin, also known as MFI2) is a Protein Coding gene. The protein encoded by this gene is a cell-surface glycoprotein found on melanoma cells. The protein shares sequence similarity and iron-binding properties with members of the transferrin superfamily. MELTF is broadly expressed in the salivary gland, kidney, and other tissues. The long non-coding RNA MFI2 antisense RNA is overexpressed in human cancer tissues and its increased expression is associated with the occurrence and metastasis of cancer. lncRNA MFI2 could promote

proliferation and migration of osteosarcoma cells by regulating FOXP4 expression, which suggested critical roles of lncRNA MFI2 and FOXP4 in the occurrence and development of human osteosarcoma. Diseases associated with MELTF include Osteogenic Sarcoma and Melanotic Neuroectodermal Tumor.

Reference

Richardson DR. (2000) The role of the membrane-bound tumour antigen, melanotransferrin (p97), in iron uptake by the human malignant melanoma cell. Eur J Biochem. 267(5): 1290-8.

Kim DK,et al.(2001) Serum melanotransferrin, p97 as a biochemical marker of Alzheimer's disease. Neuropsychopharmacology. 25(1): 84-90.

Rothenberger S,et al.(1996) Coincident expression and distribution of melanotransferrin and transferrin receptor in human brain capillary endothelium. Brain Res. 712(1): 117-21.

Baker EN,et al.(1992) Human melanotransferrin (p97) has only one functional iron-binding site. FEBS Lett. 298(2-3): 215-8.

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