

Human Transferrin Receptor / TFRC / CD71 Protein (ECD, His Tag)

Catalog Number: 11020-H07H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

CD71; p90; T9; TFR; TFR1; TR; TRFR

Protein Construction:

A DNA sequence encoding the extracellular domain of human TFRC (AAA61153.1) (Cys89-Phe760) was expressed with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE. > 90 % as determined by SEC-HPLC. ≥ 90 % as determined by SEC-MALS (Routinely tested).

Bio Activity:

1. Immobilized Recombinant Human Transferrin Receptor / TFRC / CD71 Protein (ECD, His Tag) (Cat: 11020-H07H) at 2 µg/ml (100 µl/well) can bind Recombinant Human Transferrin Protein, Biotinylated (Cat: 11019-HNAH2-B), the EC50 is 4-15 ng/mL (QC tested).

2. Recombinant Human Transferrin Receptor / TFRC / CD71 Protein (ECD, His Tag) (Cat: 11020-H07H) captured on CM5 chip via Anti-His antibody, can bind Recombinant Human Transferrin Protein (Cat: 11019-HNAH2) with an affinity constant of 63.500 nM as determined in an SPR assay (Biacore T200) (QC tested).

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Predicted N terminal: His

Molecular Mass:

The recombinant human TFRC comprises 688 amino acids and has a predicted molecular mass of 77.37 kDa. As a result of glycosylation, the recombinant protein migrates as an approximately 74 kDa protein in SDS-PAGE under reducing conditions. The molecular weight of this protein is around 160.3 kDa verified by SEC-MALS (Routinely tested).

Formulation:

Lyophilized from sterile 50 mM HEPES, 300 mM NaCl, 8% Sucrose, 30 mM Arg, 30 mM Glu, pH 8.0.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Stability & Storage:

Samples are stable for twelve months from date of receipt at -20°C to -80°C.

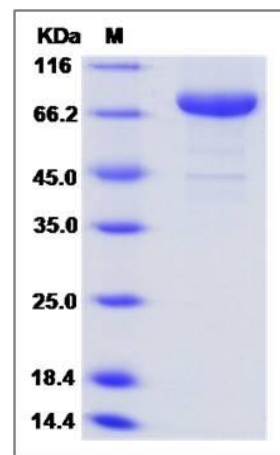
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Transferrin receptor protein 1, also known as transferrin receptor, Trfr, p9, CD71 and TFRC, is a single-pass type II membrane protein that belongs to the peptidase M28 family and M28B subfamily. TFRC / CD71 is a membrane-bound protein expressed in larger amounts in proliferating. The specific expression of TFRC can represent a diagnostic tool or a therapeutic target in solid tumours expressing this antigen. Transferrin receptor is necessary for development of erythrocytes and the nervous system. TFRC / CD71 is regulated by cellular iron levels through binding of the iron regulatory proteins, IRP1 and IRP2, to iron-responsive elements in the 3'-UTR. Up-regulated upon mitogenic stimulation. TFRC / CD71 represents a marker of malignant transformation in the pancreas that could be applied as potential diagnostic and therapeutic target.

References

1. Douabin-Gicquel V., et al., 2001, Hum. Genet. 109:393-401.
2. Ryschich, E. et al., 2004, Eur J Cancer. 40 (9):1418-22.
3. Tosoni D., et al., 2005, Cell 123:875-888.