

Transferrin Receptor/TFRC Protein, Human, Recombinant (N-hFc)

General Information

Synonyms:	CD71;T9;transferrin receptor;TFR1;p90;TRFR;TFR;TR
Protein Construction:	A DNA sequence encoding the human TFRC (CAA25527.1) (Cys89-Phe760) was expressed with the Fc region of human IgG1 at the N-terminus. Predicted N terminal: Glu
Species:	Human
Expression Host:	HEK293 Cells
Accession:	CAA25527.1
Molecular Weight:	103.6 kDa (predicted)

QC Testing

Biological Activity:	Immobilized Recombinant Human Transferrin Protein (Cat#TMPY-07047) at 2 µg/mL (100 µL/well) can bind Recombinant Human TFRC/CD71 Protein (Fc Tag) (Cat#TMPY-05096), with a linear range of 0.16-4.0 µg/mL.
Purity:	> 87 % 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:
Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

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

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

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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.

Reference

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Ryschich, E. et al., 2004, Eur J Cancer. 40 (9):1418-22.

Tosoni D., et al., 2005, Cell 123:875-888.

Wollscheid B., et al., 2009, Nat. Biotechnol. 27:378-386.

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