

Transferrin Receptor/TFRC Protein, Cynomolgus, Rhesus, Recombinant (His)

General Information

Synonyms:	transferrin receptor
Protein Construction:	A DNA sequence encoding the cynomolgus/rhesus TFRC (XP_005545315.1/NP_001244232.1) (Cys89-Phe760) was expressed with a polyhistidine tag at the N-terminus. Cynomolgus and Rhesus TFRC sequences are identical. Predicted N terminal: His
Species:	Cynomolgus,Rhesus
Expression Host:	HEK293 Cells
Accession:	XP_005545315.1&NP_001244232.1
Molecular Weight:	77.5 kDa (predicted)

QC Testing

Biological Activity:	Measured by its ability to neutralize transferrin-mediated proliferation of MCF-7 cells. The ED50 for this effect is typically 0.2-2µg/mL.
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:	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. <small>Actual storage temperature shall be subject to the COA.</small>

Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.
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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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Tosoni D., et al., 2005, Cell 123:875-888.

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

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