

Transferrin Receptor/TFRC Protein, Human, Recombinant (His & Avi), Biotinylated

General Information

Synonyms:	TFRC;sTfR;T9;p90;CD71;TR;TFR;TfR1
Protein Construction:	Cys89-Phe760
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P02786
Molecular Weight:	77.9 kDa (predicted). Due to glycosylation, the protein migrates to 80-85 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	Immobilized Anti-Transferrin R Antibody at 1 µg/ml (100 µl/well) on the plate. Dose response curve for Biotinylated Human Transferrin R, His Tag with the EC50 of 41.4 ng/ml determined by ELISA.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
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, 8% trehalose is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 µg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

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

The transferrin receptor (CD71) is known as a receptor for IgA1 on mesangial cells. The transcript and protein expression of glomerular CD71 was determined by real-time polymerase chain reaction and immunohistochemistry. Human mesangial cells (HMCs) were treated with sera from IgAN patients and expression levels of CD71 and inflammatory cytokine markers were compared according to disease status.

Reference

Jhee JH, et al. CD71 mesangial IgA1 receptor and the progression of IgA nephropathy. Transl Res. 2021 Apr;230:34-43. doi: 10.1016/j.trsl.2020.10.007. Epub 2020 Oct 24. PMID: 33122053.

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