

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

### General Information

Synonyms:	sTfR;CD71;TfR1;TFR;p90;TFRC;TR;T9
Protein Construction:	Cys89-Phe760
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P02786-1
Molecular Weight:	101.8 kDa (predicted). Due to glycosylation, the protein migrates to 105-115 kDa based on Tris-Bis PAGE result.

### QC Testing

Biological Activity:	<ol style="list-style-type: none"><li>1. Immobilized Human Transferrin R, hFc Tag at 2µg/ml (100µl/well) on the plate. Dose response curve for Biotinylated Anti-Transferrin R Antibody, hFc Tag with the EC50 of 26.5 ng/ml determined by ELISA (QC Test).</li><li>2. Human Transferrin R, hFc Tag captured on CM5 Chip via Anti-Fc Antibody can bind Human Transferrin, His Tag with an affinity constant of 0.1µM as determined in SPR assay.</li></ol>
Purity:	> 95% as determined by Tris-Bis 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, 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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Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481