

# Human Transferrin Protein

Cat. No. TFN-HM101

## Description

<b>Source</b>	Recombinant Human Transferrin Protein is expressed from HEK293 with His tag at the C-Terminus. It contains Val20-Pro698.
<b>Accession</b>	AAH59367
<b>Molecular Weight</b>	The protein has a predicted MW of 76.3 kDa. Due to glycosylation, the protein migrates to 78-82 kDa based on Tris-Bis PAGE result.
<b>Endotoxin</b>	Less than 1EU per $\mu\text{g}$ by the LAL method.
<b>Purity</b>	> 95% as determined by Tris-Bis PAGE > 95% as determined by HPLC

## Formulation and Storage

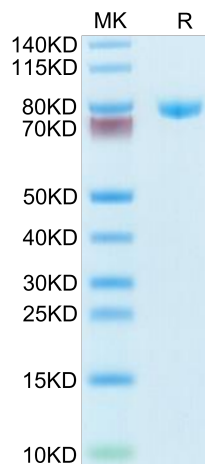
<b>Formulation</b>	Lyophilized from 0.22 $\mu\text{m}$ filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
<b>Reconstitution</b>	Centrifuge the tube before opening. Reconstituting to a concentration more than 100 $\mu\text{g}/\text{ml}$ is recommended. Dissolve the lyophilized protein in distilled water.
<b>Storage</b>	-20 to -80°C for 12 months as supplied from date of receipt. -20 to -80°C for 3-6 months in unopened state after reconstitution. 2-8°C for 2-7 days after reconstitution. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.

## Background

Transferrin (Tf), an iron transporter, is mainly biosynthesized in the liver, but can also be biosynthesized in the brain; i.e., by oligodendrocytes and the choroid plexus, a cerebrospinal fluid (CSF) producing tissue. The CSF contains two Tf isoforms, brain-type Tf and serum-type Tf, which differ in their glycan structures. Brain-type Tf is uniquely glycosylated with biantennary asialo- and agalacto-complex type N-glycans that carry bisecting  $\beta$ 1,4-GlcNAc and core  $\alpha$ 1,6-Fuc. The glycans of serum-type Tf in the CSF are similar to those of Tf in serum.

## Assay Data

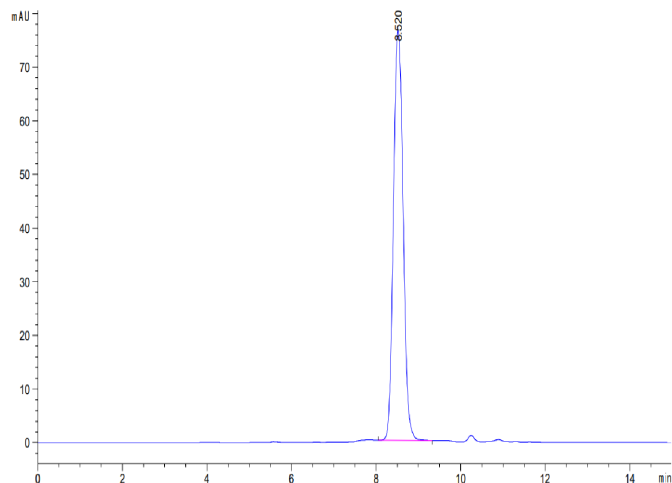
### Tris-Bis PAGE



Human Transferrin on Tris-Bis PAGE under reduced condition. The purity is greater than 95%.

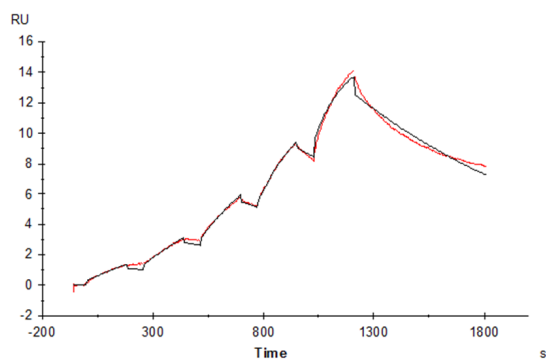
### SEC-HPLC

Assay Data



The purity of Human Transferrin is greater than 95% as determined by SEC-HPLC.

SPR Data



Human Transferrin, His Tag immobilized on CM5 Chip can bind Human Transferrin R, His Tag with an affinity constant of 27.50 nM as determined in SPR assay (Biacore T200).