# Rhesus macaque Transferrin Protein, His Tag (MALS verified)

Catalog # TRN-R52H3

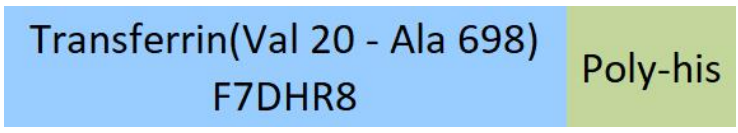
## Synonym

Transferrin,TF,DKFZp781D0156,PRO1557,PRO2086

## Source

Rhesus macaque Transferrin Protein, His Tag(TRN-R52H3) is expressed from human 293 cells (HEK293). It contains AA Val 20 - Ala 698 (Accession # F7DHR8).
Predicted N-terminus: Val 20

## Molecular Characterization




This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 76.9 kDa. The protein migrates as 75-85 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Endotoxin

Less than 1.0 EU per μg by the LAL method.

## Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

## Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

## Reconstitution

Please see Certificate of Analysis for specific instructions.

***For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.***

## Storage

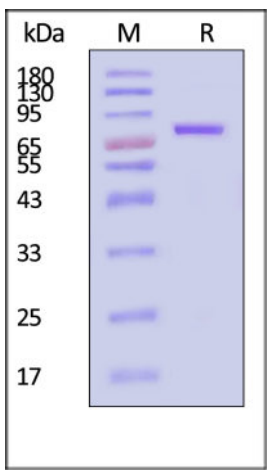
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

***Please avoid repeated freeze-thaw cycles.***

This product is stable after storage at:

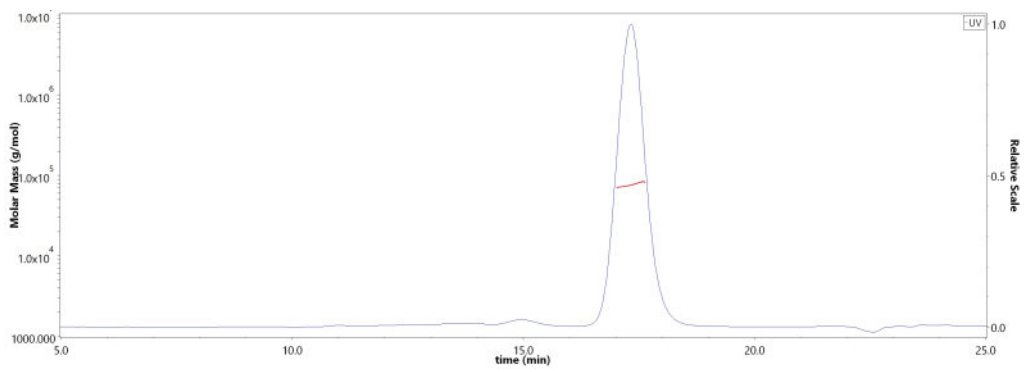
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

## SDS-PAGE



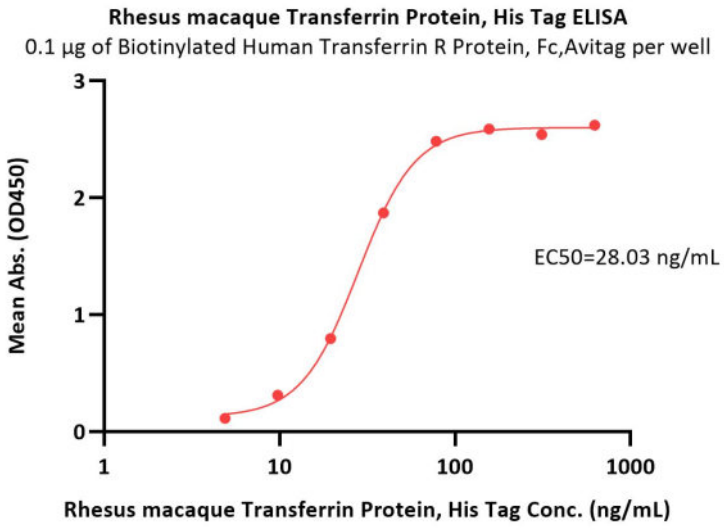

Rhesus macaque Transferrin Protein, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With Star Ribbon Pre-stained Protein Marker).

## SEC-MALS

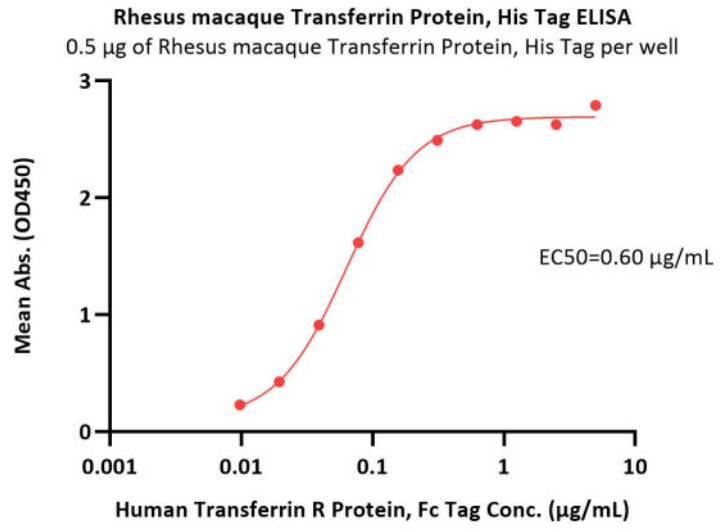



The purity of Rhesus macaque Transferrin Protein, His Tag (Cat. No. TRN-R52H3) is more than 90% and the molecular weight of this protein is around 70-100 kDa verified by SEC-MALS.
Report

## Bioactivity-ELISA




Immobilized Biotinylated Human Transferrin R Protein, Fc,Avitag (Cat. No. TFR-H82F3) at 1 μg/mL (100 μL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 μg/well) plate can bind Rhesus macaque Transferrin Protein, His Tag (Cat. No. TRN-R52H3) with a linear range of 5-78 ng/mL (QC tested).




Immobilized Rhesus macaque Transferrin Protein, His Tag (Cat. No. TRN-R52H3) at 5 μg/mL (100 μL/well) can bind Human Transferrin R Protein, Fc Tag (Cat. No. TFR-H5264) with a linear range of 0.01-0.156 μg/mL (Routinely tested).

## Background

Transferrin is also known as Serotransferrin, Beta-1 metal-binding globulin, TF, and is iron-binding blood plasma glycoproteins that control the level of free iron in biological fluids. Although iron bound to transferrin is less than 0.1% (4 mg) of the total body iron, it is the most important iron pool, with the highest rate of turnover (25 mg/24 h). The affinity of transferrin for Fe(III) is extremely high (1023 M−1 at pH 7.4) but decreases progressively with decreasing pH below neutrality.When not bound to iron, it is known as "apo-transferrin". In humans, transferrin consists of a polypeptide chain containing 679 amino acids. It is a complex composed of alpha helices and beta sheets to form two domains (the first situated in the N-terminus and the second in the C-terminus). The N- and C- terminal sequences are represented by globular lobes and between the two lobes is an iron-binding site. The liver is the main source of manufacturing transferrin, but other sources such as the brain also produce this molecule . Transferrin is also associated with the innate immune system. Transferrin is found in the mucosa and binds iron, thus creating an environment low in free iron that impedes bacteria survival in a process called iron withholding. The level of transferrin decreases in inflammation. The metal binding properties of transferrin have a great influence on the biochemistry of plutonium in humans. Transferrin has a bacteriocidal effect on bacteria, in that it makes Fe3+ unavailable to the bacteria.Carbohydrate deficient transferrin increases in the blood with heavy ethanol consumption and can be monitored via laboratory testing.

## Clinical and Translational Updates