

Recombinant Mouse Transferrin/TF Protein

Catalog No.: RP01603 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Mouse	22041	Q92111

Tags

C-hFc

Synonyms

Cf3;Transferrin;TF;PRO1557;PRO2086;Trf

Product Information

Source	Purification
HEK293 cells	> 95% by SDS-PAGE.

Calculated MW	Observed MW
100.85 kDa	100-120 kDa

Endotoxin

<0.1EU/μg

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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Background

Transferrin is a glycoprotein with an approximate molecular weight of 76.5 kDa. This glycoprotein is thought to have been created as a result of an ancient gene duplication event that led to generation of homologous C and N-terminal domains each of which binds one ion of ferric iron. The function of Transferrin is to transport iron from the intestine, reticuloendothelial system, and liver parenchymal cells to all proliferating cells in the body. This protein may also have a physiologic role as granulocyte / pollen-binding protein (GPBP) involved in the removal of certain organic matter and allergens from serum. Transferrins are iron binding transport proteins that bind Fe³⁺ ion in association with the binding of an anion, usually bicarbonate. This transferrin binds only one Fe³⁺ ion per protein molecule. Transports iron ions from the hemolymph into the eggs during the vitellogenic stage. Transferrins are iron binding transport proteins which can bind two Fe(3+) ions in association with the binding of an anion, usually bicarbonate. It is responsible for the transport of iron from sites of absorption and heme degradation to those of storage and utilization. Serum transferrin may also have a further role in stimulating cell proliferation. When a transferrin loaded with iron encounters with a transferrin receptor on cell surface, transferrin binds to it and, as a consequence, is transported into the cell in a vesicle by receptor-mediated endocytosis. The pH is reduced by hydrogen ion pumps. The lower pH causes transferrin to release its iron ions. The receptor is then transported through the endocytic cycle back to the cell surface, ready for another round of iron uptake. Each transferrin molecule has the ability to carry two iron ions in the ferric form.

Basic Information

Description

Recombinant Mouse Transferrin/TF Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Val20-His697) of mouse Transferrin/TF (Accession #NP_598738.1) fused with and a hFc tag at the C-terminus.

Bio-Activity

Measured by its binding ability in a functional ELISA. Immobilized Mouse sTfR/CD71 (Catalog: RP01497) at 5 μg/mL (100 μL/well) can bind Mouse Transferrin/TF (Catalog: RP01603) with a linear range of 0.002-1.8 ng/mL.

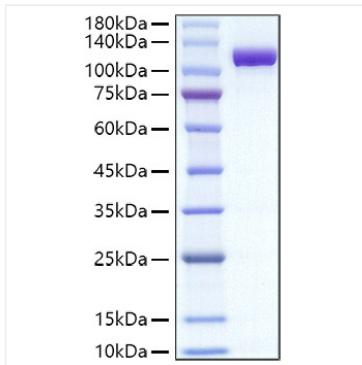
Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

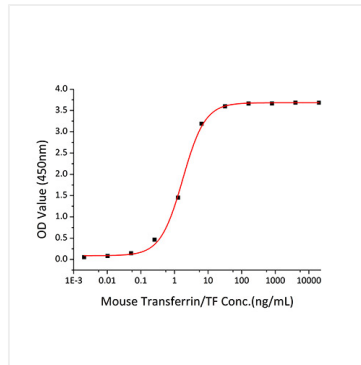
After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

Validation Data



Recombinant Mouse Transferrin/TF Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 100-120 kDa.



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