

Transferrin Active Protein | TF active protein

Transferrin Protein, Human, Recombinant (His Tag)

CATALOG #
AAA257958

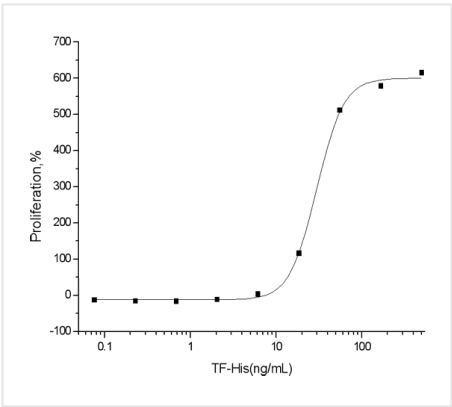
HOST
HEK293 Cells

PRODUCT SYNONYMS

Transferrin; Transferrin Protein; Human; Recombinant (His Tag); Human Transferrin/TF Protein (His Tag); HEL-S-71p Protein; PRO1557 Protein; PRO2086 Protein; TFQTL1 Protein; transferrin; TF active protein

PRODUCT SPECIFICATIONS

Host	HEK293 Cells
Purity/Purification	>95% as determined by SDS-PAGE
Form/Format	Lyophilized from sterile PBS, pH7.4. Normally 5% trehalose, 5% mannitol and 0.01% Tween80
Species	Human
Activity	1. Measured by its binding ability in a functional ELISA. Immobilized human CD71 at 10ug/ml (100uL/well) can bind human Transferrin. The EC50 of human Transferrin is 5.6ng/mL. 2. Measured in a serum-free cell proliferation assay using MCF-7 human breast cancer cells. The ED50 for this effect is typically 0.01-0.04ug/mL.
Endotoxin	<1.0EU per ug of the protein as determined by the LAL method
Predicted N Terminal	Val 20
Tag	C-His
Protein Construction	A DNA sequence encoding the human transferrin (NP_001054.1)(Met 1-Pro 698) was fused with a polyhistidine tag at the C-terminus.
Reconstitution	It is recommended that sterile water (400ul) be added to the vial to prepare a stock solution of 0.25mg/mL. Concentration is mesured by UV.
Molecular Mass	The secreted recombinant human GPR56 comprises 328 amino acids and has a predicted molecular mass of 37.4 kDa. As a result of glycosylation, the apparent molecular mass of rhGPR56 is approximately 50-60 kDa in SDS-PAGE under reducing conditions.
Preparation and Storage	Samples are stable for up to twelve months from date of receipt at -70°C. Store it under sterile conditions at -20 degree C to -80 degree C upon receiving. It is recommended to aliquot the protein into smaller quantities for optimal storage.



SDS-PAGE

Application Data

Measured in a serum-free cell proliferation assay using MCF-7 human breast cancer cells.
Karey, K.P. et al. (1988) Cancer Research 48:4083. The ED50 for this effect is typically 0.01-0.04 ug/mL.

ADDITIONAL INFORMATION

Related Product Information for TF active protein

Background: Transferrin is a glycoprotein with an approximate molecular weight of 76.5kDa. 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 transferring receptor on cell surface, transferring binds to it and, as a consequence, is transported into the cell in a visicle by receptor-mediated endocytosis. The PH is reduced by hydrogen iron 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.

References

Ponka P, et al. (1998) Function and regulation of transferrin and ferritin. Semin Hematol. 35(1): 35-54.
Wagner E, et al. (1990) Transferrin-polycation conjugates as carriers for DNA uptake into cells. Proc Natl Acad Sci. 87(9): 3410-4.
Cheng Y, et al. (2004) Structure of the human transferrin receptor-transferrin complex. Cell. 116 (4): 565-76.
Karey, K.P. et al. (1988) Cancer Research 48:4083.

NCBI AND UNIPROT INFORMATION

NCBI GI #	4557871
NCBI GeneID	7018
NCBI Accession #	NP_001054.1
NCBI GenBank Nucleotide #	NM_001063.3
UniProt Accession #	P02787; O43890; Q1HBA5; Q9NQB8; Q9UHV0
NCBI Official Full Name	serotransferrin
NCBI Official Synonym Full Names	transferrin
NCBI Official Symbol	TF
NCBI Official Synonym Symbols	TFQTL1; PRO1557; PRO2086

NCBI Protein Information	serotransferrin; siderophilin; beta-1 metal-binding globulin
UniProt Protein Name	Serotransferrin
UniProt Gene Name	TF
UniProt Synonym Gene Names	Transferrin
UniProt Entry Name	TRFE_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/hek293-cells-tf-active-protein/transferrin/257958>