Transferrin (TRF) Native Protein

PRODUCT OVERVIEW

Product Name	Transferrin (TRF), Native Protein
Full Product Name	Native Transferrin (TRF)
Product Gene Name	TRF native protein
Host	Cattle
Form/Format	Supplied as lyophilized form in 50mM TRIS, 200mM NaCl
Purity/Purification	> 95%
Preparation and Storage	Avoid repeated freeze/thaw cycles. Store at 2-8 degree C for one month. Aliquot and store at -80 degree C for 12 months. Stability Test: The thermal stability is described by the loss rate of the targetprotein. The loss rate was determined by accelerated thermal degradation test,that is, incubate the protein at 37 degree C for 48h, and no obvious degradation andprecipitation were observed. (Referring from China Biological Products Standard,which was calculated by the Arrhenius equation.) The loss of this protein is lessthan 5% within the expiration date under appropriate storage condition.
Molecular Weight	77,064 Da
Chromosome Location	Chromosome: 3; NC_000003.11 (133464977..133497850). Location: 3q22.1
OMIM	190000
3D Structure	ModBase 3D Structure for P02787
Supply Chain Verification	Manufactured in a lab with traceable raw materials. Bulk orders can typically be prepared to the customer's specifications, please inquire.
Organism	Bos taurus; Bovine (Cattle)
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Reconstitution	Reconstitute in sterile PBS, pH7.2-pH7.4.
ISO Certification	Manufactured in an ISO 9001:2015 and ISO 13485:2016 Certified Laboratory.
Applications Tested/Suitable for TRF native protein	SDS-PAGE, Western Blot (WB), ELISA (EIA), Immunoprecipitation (IP)
Related Product Information for TRF native protein	Transferrins are iron-binding blood plasma glycoproteins that control the level of free iron in biological fluids. When a transferrin protein loaded with iron encounters a transferrin receptor on the surface of a cell, it binds to it and, as a consequence, is transported into the cell in a vesicle by receptor-mediated endocytosis. The liver is the main site of transferrin synthesis, but other tissues and organs, such as the brain, also produce it. Transferrin is also associated with the innate immune system. It is found in the mucosa and binds iron, thus creating an environment low in free iron that impedes bacterial survival in a process called iron withholding. The level of transferrin decreases in inflammation. Transferrin imbalance can have serious health effects for those with low or high serum transferrin levels.
Other Notes	Small volumes of TRF native protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for TRF purchase	MBS2018315 is a native protein targeting TRF. Also known as Native Transferrin (TRF). Host: Cattle.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for TRF. It may not necessarily be applicable to this product.

NCBI GI #	339453
NCBI GeneID	7018
NCBI Accession #	AAA61140.1
UniProt Primary Accession #	P02787
UniProt Secondary Accession #	O43890; Q1HBA5; Q9NQB8; Q9UHV0
UniProt Related Accession #	P02787
NCBI Official Full Name	transferrin
NCBI Official Synonym Full Names	transferrin
NCBI Official Symbol	TF
NCBI Official Synonym Symbols	TFQTL1; PRO1557; PRO2086
UniProt Protein Name	Serotransferrin
UniProt Synonym Protein Names	Beta-1 metal-binding globulin; Siderophilin
Protein Family	TBP-related factor
UniProt Gene Name	TF
UniProt Synonym Gene Names	Transferrin
UniProt Entry Name	TRFE_HUMAN
NCBI Protein Information	serotransferrin; siderophilin; beta-1 metal-binding globulin
NCBI Summary for TRF	This gene encodes a glycoprotein with an approximate molecular weight of 76.5 kDa. It 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 this protein 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. [provided by RefSeq, Sep 2009]
UniProt Comments for TRF	TF: 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. Defects in TF are the cause of atransferrinemia (ATRAF). Atransferrinemia is rare autosomal recessive disorder characterized by iron overload and hypochromic anemia. Belongs to the transferrin family. Protein type: Secreted; Secreted, signal peptide Chromosomal Location of Human Ortholog: 3q22.1 Cellular Component: extracellular space; cell surface; cytoplasmic membrane-bound vesicle; early endosome; extracellular region; coated pit; recycling endosome; perinuclear region of cytoplasm; endocytic vesicle; late endosome; apical plasma membrane; basal plasma membrane; endosome membrane; vesicle Molecular Function: protein binding; ferric iron binding; ubiquitin protein ligase binding Biological Process: platelet activation; retinal homeostasis; platelet degranulation; cellular iron ion homeostasis; transferrin transport; blood coagulation; transmembrane transport Disease: Atransferrinemia
Research Articles on TRF	**1.** Data suggest that there is no association between plasma level of carbohydrate-deficient transferrin and volume decrease of brain gray or white matter in male subjects as result of current/recent or lifetime alcohol drinking in the Netherlands.

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