

Human Transferrin

Cat. No. TF-4777H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Product is the lyophilized powder of human TF and buffer salts. Human TF is purified from pooled human serum using multi-step procedures which may include salt fractionation, gel filtration, ion-exchange chromatography and immunoabsorption. The product is dialyzed into 0.01M sodium phosphate, 0.07M sodium chloride, pH 7.3, filtered through a 0.22 µm filter, vialled and lyophilized. No preservative has been added.
Species	Human
Source	Human Plasma
Description	TF is a glycoprotein that binds iron very tightly but reversibly. 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). TF has a molecular weight of around 80 kDa and contains 2 specific high-affinity Fe (III) binding sites.
Preparation	The protein is purified from pooled human plasma and lyophilized from 0.02M NH ₄ HCO ₃ .
Reconstitution	The protein is readily soluble at 1% in deionised. Alternatively, it can be reconstituted with a neutral buffer, such as PBS.
SDS-PAGE	The preparation shows a tight cluster of bands with a molecular weight of 77 kDa. Dimers may appear under certain conditions.

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Protein	98% (By Lowry)
Purity	> 98 % (By Cellulose Acetate Electrophoresis)
Iron	27.85 µg/g (By Atomic Absorption). 1 gm transferrin can bind approximately 1400-1500 g of iron.
pH	7.24 (3% solution)
Endotoxin Level	0.034 EU/mg (By Limulus Amebocyte Lysate)
Microbial detection	No Mycoplasma is detected and Bioburden is less than 10 cfu/ml.
Moisture	0.9 % (By Loss on Drying)
Storage	Store at -10°C or below.
Pathways	EPHB forward signaling; Formation of Platelet plug; HIF-1-alpha transcription factor network; Hemostasis; Iron uptake and transport; Mineral absorption; Platelet Activation; Platelet degranulation; Response to elevated platelet cytosolic Ca ²⁺ ; Transferrin endocytosis and recycling; Transmembrane transport of small molecules

GENE INFORMATION

Gene Name	TF transferrin [Homo sapiens]
Official Symbol	TF
Synonyms	TF; transferring; PRO1557; PRO2086; DKFZp781D0156; serotransferrin; siderophilin; OTTHUMP00000197155; beta-1 metal-binding globulin; Serotransferrin; Beta-1 metal-binding globulin; Siderophilin

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Gene ID	7018
mRNA Refseq	NM_001063
Protein Refseq	NP_001054
MIM	190000
UniProt ID	P02787
Chromosome Location	3q21
Function	ferric iron binding; metal ion binding; protein binding; ubiquitin protein ligase binding
PDBrendering based on 1a8e	