Active Recombinant Human TF protein

Cat. No. TF-4653H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Transferrin produced in Plant is a non-glycosylated, polypeptide chain containing 679 amino acids and having a molecular mass of 76 kDa. The average amount of Ferric Iron in our is 0.4-0.5 ug per mg of protein (protein concentration is measured by absorption at 280 nm).
Species	Human
Source	Oryza Sativa
Description	Transferrin is the iron-transport protein of vertebrate serum and donates iron to cells through interaction with a specific membrane receptor, CD71. Transferrin appears to be indispensable for most cells growing in tissue culture.It is referred to frequently as a growth factor because, in analogy to other growth factor-receptor interactions, proliferating cells express high numbers of transferrin receptors, and the binding of transferrin to their receptors is needed for cells to initiate and maintain their DNA synthesis. Apart from its role as an iron transport protein transferrin acts as a cytokine and has functions that may not be related to its iron-carrying capacity.
Form	Sterile Filtered lyophilized (freeze-dried) powder. The protein (1mg/ml) was lyophilized with no additives.
Bio-activity	One mg of Recombinant Human Transferrin will bind to approximately 2 micrograms of Fe.
Purity	Purity as determined by SDS-PAGE is 95%.

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Applications	Recombinant Human Transferrin has increased the growth of numerous cell types including hybridoma and primary cell lines. The optimal concentration of Recombinant Human Transferrin for cell culture differs with the cell line. In CHO, effective concentrations range from 10-50 mg/liter. The reported effective concentrations for hybridoma and Vero cell lines range from 5mg/liter to 20mg/liter. Effective concentrations for primary cells range between 5mg/liter to 100mg/liter.
Quality Control Test	Animal component-free.Well defined and consistent.Universal iron carrier in cell culture.Replaces plasma-derived human and bovine transferrin.Replaces iron chelators.
Stability	Lyophilized Transferrin although stable at room temperature for 3 weeks, should be stored desiccated below -18 centigrade. Upon reconstitution Transferrin Human Recombinant should be stored at 4 centigrade between 2-7 days and for future use below -18 centigrade.For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.
Reconstitution	Stock solutions can be prepared by dissolving gently into PBS for several minutes. Recommended stock concentrations are 5mg/ml to 20 mg/ml in PBS, though others can be used as well. Please try to avoid the formation of bubbles when dissolving the protein. Sterile filter through 0.2μm filter.

GENE INFORMATION

Gene Name	TF transferrin [Homo sapiens]
Official Symbol	TF
Synonyms	TF; transferrin; serotransferrin; PRO1557; PRO2086; siderophilin; beta-1 metal-binding globulin; TFQTL1; DKFZp781D0156;

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Gene ID	7018
mRNA Refseq	NM_001063
Protein Refseq	NP_001054
MIM	190000
UniProt ID	P02787
Chromosome Location	3q21
Pathway	EPHB forward signaling, organism-specific biosystem; HIF-1-alpha transcription factor network, organism-specific biosystem; Hemostasis, organism-specific biosystem; Iron uptake and transport, organism-specific biosystem; Mineral absorption, organism-specific biosystem; Mineral absorption, conserved biosystem; Platelet activation, signaling and aggregation, organism-specific biosystem;
Function	ferric iron binding; metal ion binding; protein binding; ubiquitin protein ligase binding;

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