Recombinant Human Transferrin

Cat. No. TF-03H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Specifically Produced for use as a Cell Culture Media Supplement.
Species	Human
Source	Oryza Sativa
Description	TF-03H is recombinant human transferrin that is completely animal component free. Its performance is equivalent to human transferrin in cell culture and offers significant regulatory advantages due to its safety and consistency. TF-03H is produced in an animal-free system, which eliminates safety concerns associated with animal or human derived transferrin that can cause contamination with viruses and prions. In addition, TF-03H is a consistent product with none of the lot-to-lot variability seen in other transferrins and is an excellent animal-free replacement for bovine transferrin and plasma-derived human transferrin.As a universal iron carrier, TF-03H also provides better performance than other iron sources and iron chelators. All cells need iron for cell division and transferrin is specifically designed to deliver iron to the cells. Each cell has transferrin receptors that ensure optimal iron delivery based on the actual iron need of the cells. The cells decide how much iron they need, thus eliminating the problem of too much iron causing cell damage. The problem with alternative iron sources and iron chelators is that cells cannot regulate the amount of iron that is delivered and studies have shown that cells can take in 100 times physiological intracellular iron. The uptake of too much iron causes significant cell damage and other iron sources can cause oxidative damage which also causes cell damage; neither of these types of damage can occur when transferrin is used.TF-03H

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	has been shown to increase the quality and quantity of a wide range of cell types including stem cells, primary cells, CHO cells, and Vero cells.
Endotoxin	≤ 1 EU/mg
Purity	> 95%
Characteristic	Protein Content (Nitrogen analyzer) > 90%pH (1% solution) 6.0 – 8.0Solubility (1%, A600nm) < 0.5Moisture Content < 10%

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;
Gene ID	7018
mRNA Refseq	NM_001063
Protein Refseq	NP_001054
MIM	190000
UniProt ID	P02787
Chromosome Location	3q21

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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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