Catalog Number: HZ-1317-GMP

Data Sheet

HumanKine® recombinant human Transferrin protein- GMP grade

Animal Component-Free	Human cell expressed	Tag-Free	Endotoxin Free

Product Description

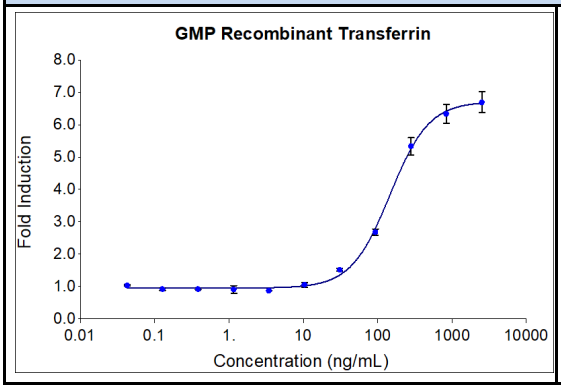
Transferrin is an 80kDA, monomeric glycoprotein that is responsible for binding ferric iron and transporting it throughout the body. It is primarily produced by hepatocytes and is a critical component of iron homeostasis as it delivers free iron to tissue sites where it is absorbed and utilized by the body. Once it reaches a site of absorption, iron-loaded transferrin binds to its corresponding transferrin receptor and taken up by the cell through endocytosis, after which the iron is disassociated, and free transferrin is released back into the bloodstream at a turnover rate of around 10 times per day. In addition to iron homeostasis, transferrin also plays an important role in the innate immune system. Downregulation of transferrin receptor expression has been linked to the reduced ability of intracellular pathogens to access a cell's iron supply. Measurement of transferrin levels in the blood can also serve as a clinical marker for possible iron deficiency (PMID: 30422523, 22033148).

Alternative Names	HEL-S-71p, PRO1557, PRO2086, TFQTL1
Accession Number	P02787
Source	Human Embryonic Kidney cells (HEK293). HEK293-derived Transferrin protein
Species Reactivity	human
Adventitious Virus	Master Cell Bank tested Negative for Adventitious Viruses

Specifications

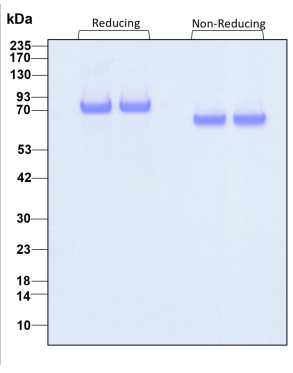
Test	Method	Specification
Activity	Dose-dependent stimulation of the proliferation of the OKT4 mouse hybridoma cell line	65-330 ng/mL
Molecular Mass	SDS-PAGE	80 kDa reduced, 70 kDa non-reduced, monomer, glycosylated
Purity	SDS-PAGE	>95%
Endotoxin	LAL	<0.1 EU/μg
Mycoplasma	PCR	Not Detected

Activity Data



Recombinant GMP human Transferrin (Cat no: HZ-1317-GMP) stimulates dose-dependent proliferation of the OKT4 mouse hybridoma cell line. Cell number was quantitatively assessed by Prestoblue® Cell Viability Reagent. OKT4 cells were treated with increasing concentrations of recombinant Transferrin for 72 hours. The EC50 was determined using a 4-parameter non-linear

SDS-PAGE



Purity of GMP recombinant human Transferrin was determined by SDS- polyacrylamide gel electrophoresis. The protein was resolved in an SDS- polyacrylamide gel in reducing and non-reducing conditions and stained using Coomassie blue.

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Preparation	
Shipping Temperature	ambient temperature
Formulation	1x PBS
Reconstitution	Briefly centrifuge the vial before opening. It is recommended to reconstitute the protein to 0.2 mg/mL in sterile 1x PBS pH 7.4 containing 0.1% endotoxin-free recombinant human serum albumin (HSA). Gently swirl or tap vial to mix.

	Product Form	Temperature Conditions	Storage Time (From Date of Receipt)
Stability and Storage	Lyophilized	-20°C to -80°C	Until Expiry Date
	Lyophilized	Room Temperature	2 weeks
	Reconstituted as per CofA	-20°C to -80°C	6 months
	Reconstituted as per CofA	4°C	1 week
	Avoid repeated freeze-thaw cycles.		

Proteintech GMP Quality Policy
HumanKine® GMP Proteins

Invitro recombinant protein production can be prone to variability due to various reasons ranging from quality of raw materials to inconsistency in the process. Therefore, HumanKine®, a proteintech brand's GMP proteins are produced and tested under an ISO 13485 certified quality management system in a clean room facility. Proteintech manufactures the GMP HumanKine® products according to the applicable sections in the following documents: USP Chapter 1043 (Ancillary Materials for Cell, Gene, and Tissue-Engineered Products, USP Chapter 92 (Growth Factors and Cytokines Used in Cell Therapy Manufacturing), WHO TRS, No. 822, 1992 Annex 1 (Good Manufacturing Practices for Biological Products), Ph. Eur. General Chapter 5.2.12, and EudraLex – Volume 4 – Part IV (Guidelines on GMP specific to ATMPs). Proteintech strives to achieve the utmost quality GMP raw material ensuring all applicable guidelines are taken into consideration.

The QMS is built to provide our customers with consistent and pure product delivered by documented processes, qualified personnel, validated processes, qualified equipment, qualified vendors, and a stringent final product release process. Although the final product release process is important, Proteintech performs in-process QC steps after each major manufacturing stage. Production records and facilities may be available for an inspection by approved personnel.

Our GMP policy covers all the aspects of production; from raw materials, facility, equipment, and Instruments to training and personal hygiene of staff. It also guarantees that the process is explicit, validated and well documented for transparency and traceability.

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