
Product Data Sheet

Product Name: LTF Human

Cat. No.: GP23844

Batch No.: 1

Product Data

Purity	>98%	Source	Human breast milk.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.

Synonyms Lactotransferrin; Lactoferrin; Growth-inhibiting protein 12; Talalactoferrin; LTF; GIG12; LF; HLF2; Neutrophil Lactoferrin.

Amino Acid Sequence
 GRRRSVQWCA VSQPEATKCF QWQRNMRKVR GPPVSCIKRD SPIQCIQAIA
 ENRADAVTLD GGFIYEAGLA PYKLRPVAEE VYGTERQPRT HYYAVAVVKK
 GGSFQLNELQ GLKSCHTGLR RTAGWNVPIG TLRPFLNWTG PPEPIEAAVA
 RFFSASCVPG ADKGQFPNLC RLCAGTGENK CAFSSQEPYF SYSGAFKCLR
 DGAGDVAFIR ESTVFEDLSD EAERDEYELL CPDNTRKPV D KFKDCHLARV
 PSHAVVARSV NGKEDAIWNL LRQAQEKFGK DKSPKFQLFG SPSGQKDLLF
 KDSAIGFSRV PPRIDSGLYL GSGYFTAIQN LRKSEEEVAA RRARVWCAV
 GEQELRKCQN WSGLSEGSVT CSSASTTEDC IALVLKGEAD AMSLDGGYVY
 TAGKCGLVVPV LAENYKSQQS SDPDPNCVDR PVEGYLAVAV VRRSDTSLTW
 NSVKGKKSCH TAVDRTAGWN IPMGLLFNQT GSCKFDEYFS QSCAPGSDPR
 SNLCALCIGD EQGENKCVPN SNERYGYTG AFRCLAENAG DVAFVKDVTV
 LQNTDGNNE AWAKDLKLAD FALLCLDGKR KPVTEARSCH LAMAPNHAVV
 SRMDKVERLK QVLLHQQAKF GRNGSDCPDK FCLFQSETKN LLFNDNTECL
 ARLHGKTTYE KYLGPQYVAG ITNLKCKSTS PLLEACEFLR K.

Solubility It is recommended to add deionized water to prepare a working stock solution of approximately 0.5 mg/ml and let the lyophilized pellet dissolve completely. Product is not sterile! Please filter the product by an appropriate sterile filter before using it in the cell culture.

Formulation LTF protein filtered (0.4µm) and lyophilized in 0.5 mg/ml in 0.05M phosphate buffer and 0.075M NaCl, pH 7.4.

Introduction

Lactoferrin is a glycoprotein that belongs to the transferrin family of iron binding

Caution: Product has not been fully validated for medical applications. For research use only.

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proteins. It is found in human breast milk as well as most epithelial surface secretions including tears, nasogastric, saliva, and bronchial. Lactoferrin binds 2 molecules of iron with very high affinity. Lactoferrin inhibits bacterial growth by withholding iron, its N-terminal region is an antimicrobial peptide. Lactotransferrin acts synergistically with lysozyme to potentiate the activity of both proteins. The multifunctional protein lactoferrin has many physiological possible roles. It is often referred to as an innate defense protein and frequently serves as the first line of defense in protection against pathogens. It has been shown to have the ability to bind iron, it is a natural anti-bacterial, anti-fungal and anti-viral, it is an antioxidant and it also has immunomodulatory properties. It has many beneficial properties, which make it a good candidate for a number of product applications. Considerable research is currently going on to explain the various suggested biological functions of lactoferrin.

Stability

Store lyophilized protein at -20°C . Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after two weeks at 4°C .

Background

The Human Lactoferrin produced from Human breast milk has a molecular mass of 76.165kDa (calculated without glycosylation) containing 691 amino acid residues.

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