Data Sheet (Cat.No.TMPY-02728)

TargetMol

LTF/Lactoferrin, Mouse, Recombinant (His)

General Information

Synonyms:	MMS10R;Lf;Csp82;lactotransferrin;Ms10r
Protein Construction:	A DNA sequence encoding the mouse LTF (AAH06904.1) (Met 1-Gln 707) was expressed, with a C-terminal polyhistidine tag. Predicted N terminal: Ala 28
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	AAH06904.1
Molecular Weight:	77.2 kDa (predicted); 70 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 92 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Lactotransferrin, also known as Lactoferrin, Talalactoferrin, and LTF, is a secreted protein that belongs to the transferrin family. Transferrins are iron binding transport proteins that can bind two Fe3+ions in association with the binding of an anion, usually bicarbonate. Lactotransferrin has antimicrobial activity which depends on the extracellular cation concentration. Lactoferroxins A, B, and C have opioid antagonist activity. Lactoferrin A shows a preference for mu-receptors, while lactoferricin B and lactoferricin C have somewhat higher degrees of preference

for kappa-receptors than for mu-receptors. Lactoferrin / LTF is a globular glycoprotein that is widely represented in various secretory fluids, such as milk, saliva, tears, and nasal secretions. Lactoferrin / LTF is also present in secondary granules of PMN and is secreted by some acinar cells. Lactoferrin / LTF can be purified from milk or produced recombinantly. Human colostrum has the highest concentration, followed by human milk, then cow milk. Lactoferrin / LTF is one of the components of the immune system of the body; it has antimicrobial activity (bacteriocide, fungicide) and is part of the innate defense, mainly at mucose. In particular, lactoferrin provides an antibacterial activity to human infants. Lactoferrin interacts with DNA and RNA, polysaccharides and heparin, and shows some of its biological functions in complexes with these ligands.

Reference

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Nozaki A, et al., 2003, J. Biol. Chem. 278 (12): 10162-73.
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