

ARG82244 Human Lactoferrin ELISA Kit

Package: 96 wells
Store at: 4°C

Summary

Product Description	ARG82244 Human Lactoferrin ELISA Kit is an Enzyme Immunoassay kit for the quantification of Human Lactoferrin in serum, plasma, milk, and cell culture supernatants.
Tested Reactivity	Hu
Tested Application	ELISA
Target Name	Lactoferrin
Conjugation	HRP
Conjugation Note	Substrate: TMB and read at 450 nm.
Sensitivity	0.025 ng/ml
Sample Type	Serum, plasma, milk and cell culture supernatants.
Standard Range	0.1 - 100 ng/ml
Sample Volume	100 µl
Alternate Names	LF; Lfcin-H; HEL110; Lactoferrin; Lactotransferrin; Growth-inhibiting protein 12; GIG12; Talalactoferrin; EC 3.4.21.-; HLF2

Application Instructions

Assay Time	2 hours
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Properties

Form	96 well
Storage instruction	Store the kit at 2-8°C. Keep microplate wells sealed in a dry bag with desiccants. Do not expose test reagents to heat, sun or strong light during storage and usage. Please refer to the product user manual for detail temperatures of the components.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	LTF
Gene Full Name	lactotransferrin
Background	This gene is a member of the transferrin family of genes and its protein product is found in the secondary granules of neutrophils. The protein is a major iron-binding protein in milk and body secretions with an antimicrobial activity, making it an important component of the non-specific immune system. The protein demonstrates a broad spectrum of properties, including regulation of iron homeostasis, host defense against a broad range of microbial infections, anti-inflammatory activity, regulation of cellular growth and differentiation and protection against cancer development and metastasis. Antimicrobial, antiviral, antifungal and antiparasitic activity has been found for this protein and its peptides. Alternatively spliced transcript variants encoding different isoforms have been found

for this gene. [provided by RefSeq, Sep 2014]

Function

Transferrins are iron binding transport proteins which can bind two Fe(3+) ions in association with the binding of an anion, usually bicarbonate.

Lactotransferrin is a major iron-binding and multifunctional protein found in exocrine fluids such as breast milk and mucosal secretions. Has antimicrobial activity, which depends on the extracellular cation concentration. Antimicrobial properties include bacteriostasis, which is related to its ability to sequester free iron and thus inhibit microbial growth, as well as direct bactericidal properties leading to the release of lipopolysaccharides from the bacterial outer membrane. Can also prevent bacterial biofilm development in *P.aeruginosa* infection. Has weak antifungal activity against *C.albicans*. Has anabolic, differentiating and anti-apoptotic effects on osteoblasts and can also inhibit osteoclastogenesis, possibly playing a role in the regulation of bone growth. Promotes binding of species C adenoviruses to epithelial cells, promoting adenovirus infection. Can inhibit papillomavirus infections. Stimulates the TLR4 signaling pathway leading to NF-kappa-B activation and subsequent pro-inflammatory cytokine production while also interfering with the lipopolysaccharide (LPS)-stimulated TLR4 signaling. Inhibits neutrophil granulocyte migration to sites of apoptosis, when secreted by apoptotic cells. Stimulates VEGFA-mediated endothelial cell migration and proliferation. Binds heparin, chondroitin sulfate and possibly other glycosaminoglycans (GAGs). Also binds specifically to pneumococcal surface protein A (pspA), the lipid A portion of bacterial lipopolysaccharide (LPS), lysozyme and DNA.

Lactoferricin binds to the bacterial surface and is crucial for the bactericidal functions. Has some antiviral activity against papillomavirus infection. N-terminal region shows strong antifungal activity against *C.albicans*. Contains two BBXB heparin-binding consensus sequences that appear to form the predominate functional GAG-binding site.

Kaliocin-1 has antimicrobial activity and is able to permeabilize different ions through liposomal membranes.

Lactoferroxins A, B and C have opioid antagonist activity. Lactoferroxin A shows preference for mu-receptors, while lactoferroxin B and C have somewhat higher degrees of preference for kappa-receptors than for mu-receptors.

The lactotransferrin transferrin-like domain 1 functions as a serine protease of the peptidase S60 family that cuts arginine rich regions. This function contributes to the antimicrobial activity.

Isoform DeltaLf: transcription factor with antiproliferative properties and ability to induce cell cycle arrest. Binds to the DeltaLf response element found in the SKP1, BAX, DCPS, and SELH promoters. [UniProt]

Highlight

Related products:
[Lactoferrin antibodies](#); [Lactoferrin ELISA Kits](#);
New ELISA data calculation tool:
[Simplify the ELISA analysis by GainData](#)

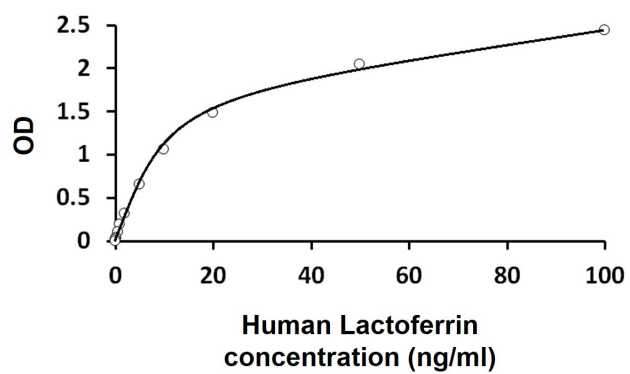
PTM

Isoform DeltaLf: Ubiquitinated at Lys-379 and Lys-391.

Poly-N-acetyllactosaminic carbohydrate moiety seems to be needed for TLR4 activation. [UniProt]

Cellular Localization

Isoform 1: Secreted. Cytoplasmic granule. Note=Secreted into most exocrine fluids by various endothelial cells. Stored in the secondary granules of neutrophils. Isoform DeltaLf: Cytoplasm. Nucleus. Note=Mainly localized in the cytoplasm. [UniProt]



ARG82244 Human Lactoferrin ELISA Kit standard curve image

ARG82244 Human Lactoferrin ELISA Kit results of a typical standard run with optical density reading at 450 nm.