APA780Cp01 100μg
Active Lactoferrin (LTF)
Organism Species: *Capra hircus; Caprine* (Goat)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Val25~Glu352
Tags: N-terminal His-tag
Purity: >98%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 5% trehalose.
Applications: Cell culture; Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 8.9
Predicted Molecular Mass: 37.6kDa
Accurate Molecular Mass: 37kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.
Store at 2-8°C for one month.
Aliquot and store at -80°C for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37ºC for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

VRWCAI SLPEWSKCYQ WQRRMRKLGA
PSITCIRRTS ALECIRAIAG KNADAVTLDS GMVFEAGLDP YKLRPVAAEI
YGTEKSPQTH YYAVAVVKKG SNFQLDQLQG QKSCHMGLGR SAGWNIPVGI
LRPFLSWTES AEPLQGAVAR FFSASCVPCV DGKAYPNLCQ LCKGVGENKC
ACSSQEPYFG YSGAFKCLQD GAGDVAFVKE TTVFENLPEK ADRDQYELLC
LNNTRAPVDA FKECHLAQVP SHAVVARSVD GKENLIWELL RKAQEKFGKN
KSQSFQLFGS PEGRRDLLFK DSALGFVRIP SKVDSALYLG SRYLTALKNL
RE

[ACTIVITY]

Lactotransferrin (LTF), also known as actoferrin (LF) , is a multifunctional protein of the transferrin family. Lactoferrin belongs to the innate immune system. Apart from its main biological function, namely binding and transport of iron ions, lactoferrin also has antibacterial, antiviral, antiparasitic, catalytic, anti-cancer, and anti-allergic functions and properties. LTF is widely represented in various secretory fluids, such as milk, saliva, tears, and nasal secretions. It also present in secondary granules of PMN and is secreted by some acinar cells. Besides, Clusterin (CLU) has been identified as an interactor of LTF, thus a binding ELISA assay was conducted to detect the interaction of recombinant goat LTF and recombinant goat CLU. Briefly, LTF were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100μL were then transferred to CLU-coated microtiter wells and incubated for 2h at 37℃. Wells were washed with PBST and incubated for 1h with anti-LTF pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and

washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50μL stop solution to the wells and read at 450nm immediately. The binding activity of LTF and CLU was shown in Figure 1, and this effect was in a dose dependent manner.

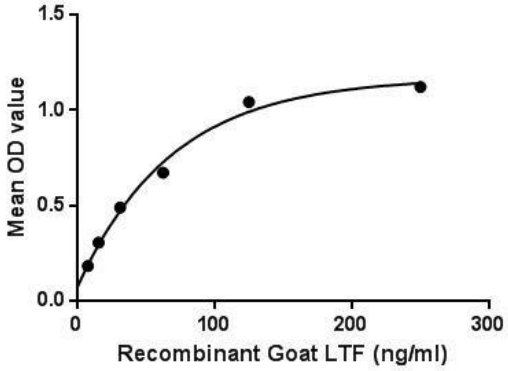

Figure 1. The binding activity of LTF with CLU.

[IDENTIFICATION]

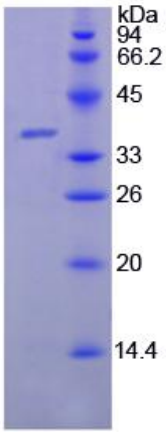

Figure 2. SDS-PAGE

Sample: Active recombinant LTF, Caprine

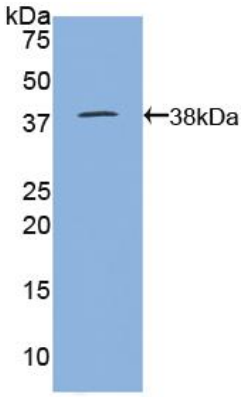

Figure 3. Western Blot

Sample: Recombinant LTF, Caprine;

Antibody: Rabbit Anti-Caprine LTF Ab (PAA780Cp01)

[IMPORTANT NOTE]

The kit is designed for in vitro and research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.