

APA780Po01 100µg

Active Lactoferrin (LTF)

Organism Species: *Sus scrofa*; *Porcine (Pig)*

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~Glu348

Tags: N-terminal His and GST Tag

Purity: >92%

Endotoxin Level: <1.0EU per 1µg (determined by the LAL method).

Buffer Formulation: PBS, pH7.4, containing 0.01% SKL, 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: 66.2kDa

Accurate Molecular Mass: 66kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) 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 37°C 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]

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VRWCVI STAEYSKCRQ WQSKIRRTNP MFCIRRASPT DCIRAIAAKR ADAVTLDGGL VFEADQYKLR  
PVAAEIYGTE ENPQTYYYAV AVVKKGFNFQ LNQLQGRKSC HTGLGRSAGW NIPIGLLRRF LDWAGPPEPL  
QKAVAKFFSQ SCVPCADGNA YPNLCQLCIG KGKDKCACSS QEPYFGYSGA FNCLHKIGID  
VAFVKESTVF ENLPQKADRD KYELLCPDNT RKPVEAFREC HLARVPSHAV VARSVNGKEN  
SIWELLYQSQ KKFSGSNPQE FQLFGSPGQQ KDLLFRDATI GFLKIPSKID SKLYLGLPYL TAIQGLRE
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[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 is also present in secondary granules of PMN and is secreted by some acinar cells. Besides, Ceruloplasmin (CP) has been identified as an interactor of LTF, thus a binding ELISA assay was conducted to detect the interaction of recombinant pig LTF and recombinant pig CP. Briefly, LTF were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100ul were then transferred to CP-coated microtiter wells and incubated for 2h at 37°C. 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°C. Finally, add 50µL stop solution to the wells and read at 450nm immediately. The binding activity of LTF and CP was shown in Figure 1, and this effect was in a dose

dependent manner.

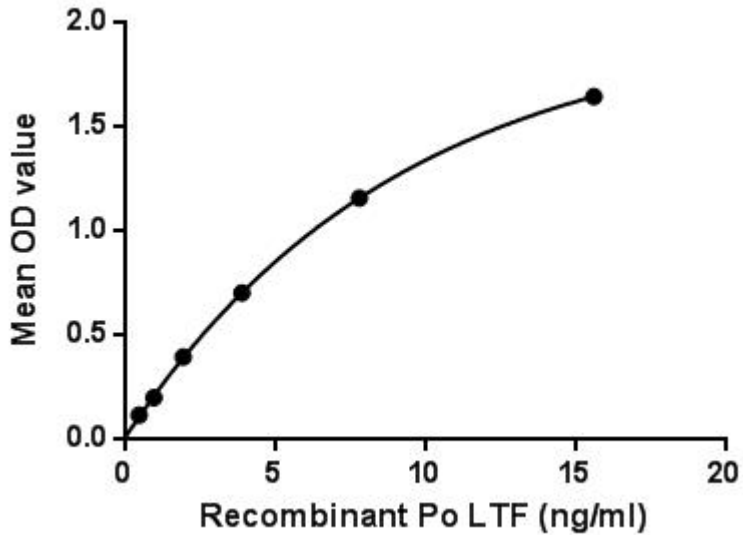


Figure 1. The binding activity of LTF with CP

[IDENTIFICATION]

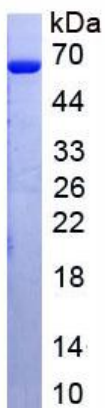


Figure 2. SDS-PAGE

Sample: Active recombinant LTF, Pig

Figure 3. Western Blot

Sample: Recombinant LTF, Pig;

Antibody: Rabbit Anti- Pig LTF Ab (PAA780Po01)

[IMPORTANT NOTE]

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