APA780Bo01 100μg
Active Lactoferrin (LTF)
Organism Species: *Bos taurus; Bovine (Cattle)*
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Natural Extract
Host: Bovine
Purity: >90%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 0.01% Sarcosyl, 5%Trehalose .
Original Concentration: 200μg/mL
Applications: Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted Molecular Mass: 78kDa
Accurate Molecular Mass: 78kDa 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 2-8ºC for one month.
Aliquot and store at -80ºC 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.

[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, Protease, Serine 1 (PRSS1) has been identified as an interactor of LTF, thus a binding ELISA assay was conducted to detect the interaction of native bovine LTF and recombinant human PRSS1. 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℃. 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 native bovine LTF and recombinant human PRSS1 was shown in Figure 1, the EC50 for this effect is 2.92ug/mL.

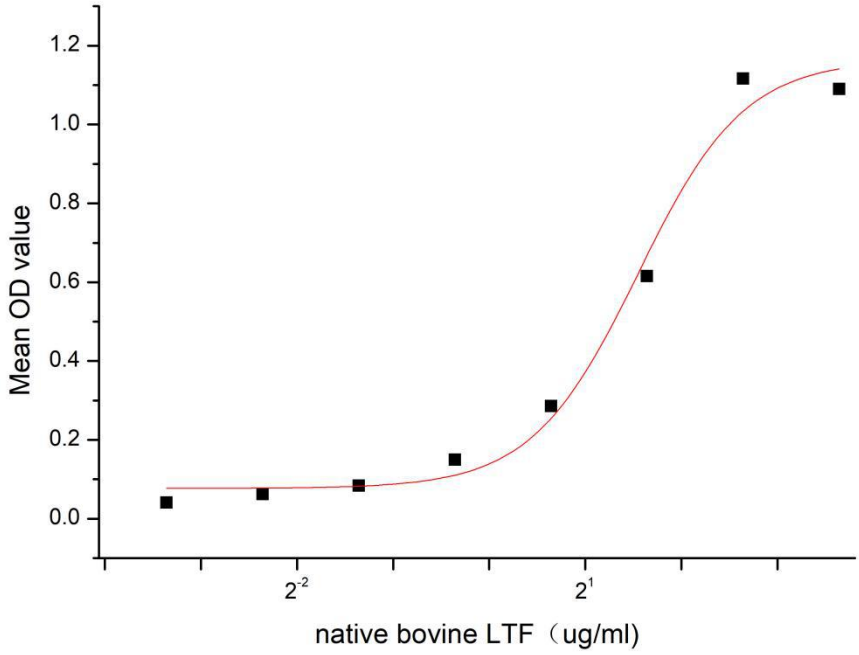

Figure 1. The binding activity of native bovine LTF and recombinant human PRSS1

[IDENTIFICATION]

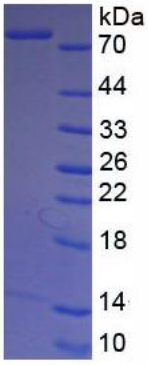

Figure 2. SDS-PAGE

Sample: Active recombinant LTF, Cattle

[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.