APS086Bo01 100μg
Active Chymotrypsin (CTR)
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: Prokaryotic expression.
Host: *E. coli*
Residues: Val30~Leu268
Tags: N-terminal His-tag
Purity: >90%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 0.01% SKL, 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 isoelectric point: 4.6
Predicted Molecular Mass: 29.7kDa
Accurate Molecular Mass: 30kDa 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.

[SEQUENCE]

V VGGEDAIPHS WPWQISLQYL
RDNTWRHTCG GTLITPNHVL TAAHCISNTL TYRVALGKNN LEVEDEAGSL
YVGVDTIFVH EKWNSFLVRN DIALIKLAET VELSDTIQVA CLPEEGSLLP
QDYPCFVTGW GRLYTNGPIA AELQQGLQPV VDYATCSQRD WWGTTVKETM
VCAGGDGVIS ACNGDSGGPL NCQAENGNWD VRGIVSFGSG LSCNTFKKPT
VFTRVSAYID WINQKLQL

[ACTIVITY]

Chymotrypsin (CTR), is a serine protease produced by the pancreas. It belongs to the serine protease family and is known for its specificity towards hydrophobic amino acids. Chymotrypsin cleaves peptide bonds at the carboxyl side of aromatic amino acids, such as phenylalanine, tyrosine, and tryptophan. This enzyme is produced in the pancreas and released into the small intestine to aid in the breakdown of proteins into smaller peptides and amino acids.Colipase is a small protein cofactor,which can bind to Chymotrypsin and may affect the activity or specificity of Chymotrypsin.Thus a functional ELISA assay was conducted to detect the interaction of recombinant bovine CTR and recombinant mouse CLPS. Briefly, CTR was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to CLPS-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-CTR pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 µL stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant bovine CTR and recombinant mouse CLPS was shown in Figure 1, the EC50 for this effect is

0.005ug/mL .

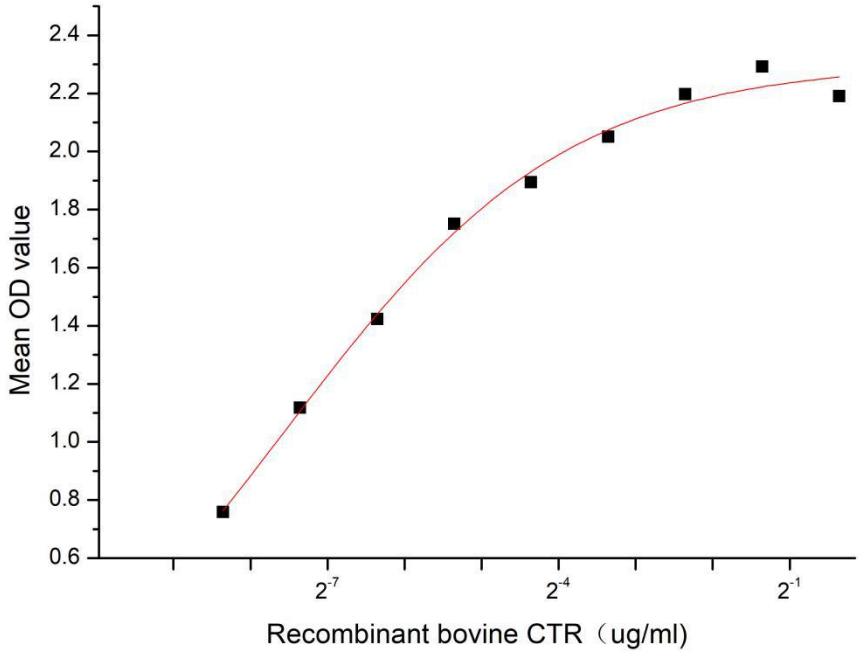

Figure 1. The binding activity of recombinant bovine CTR and recombinant mouse CLPS

[IDENTIFICATION]

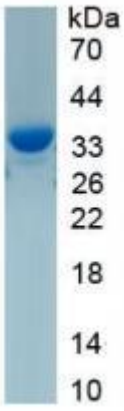

Figure 2. SDS-PAGE

Sample: Active recombinant CTR, 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.