

Active Cathepsin A (CTSA) Instruction Manual

SBPA116Ra01

Rattus norvegicus (Rat)

Buffer Formulation

20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.

Traits

Freeze-dried powder

Purity

> 90%

Isoelectric Point

7.0

Applications

Cell culture; Activity Assays.

ACTIVITY TEST

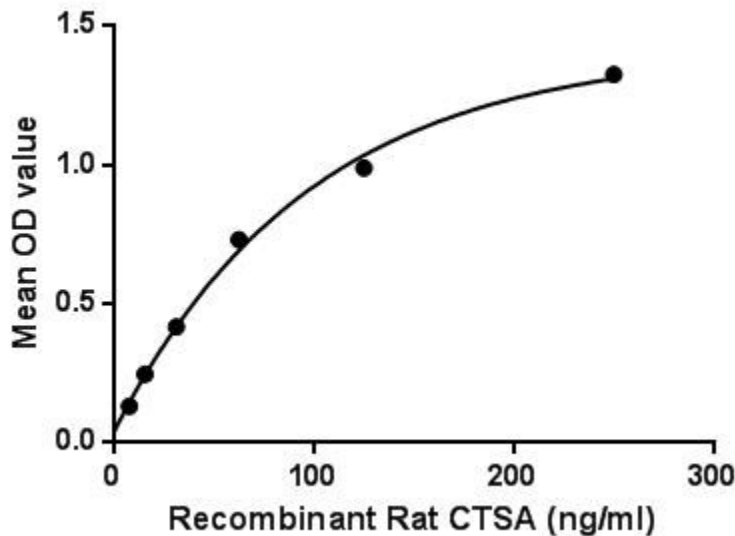


Figure. The binding activity of CTSA with NEU.

Cathepsin A (CTSA) is an enzyme that is classified both as a cathepsin and a carboxypeptidase. This gene encodes a glycoprotein that associates with lysosomal enzymes beta-galactosidase and neuraminidase to form a complex of high-molecular-weight multimers. The formation of this complex provides a protective role for stability and activity. It is protective for β -galactosidase and neuraminidase. Besides, Neuraminidase (NEU) has been identified as an interactor of CTSA, thus a binding ELISA assay was conducted to detect the interaction of recombinant rat CTSA and recombinant rat NEU. Briefly, CTSA were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ L were then transferred to NEU-coated microtiter wells

and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-CTSA 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 CTSA and NEU was shown in Figure 1, and this effect was in a dose dependent manner.

USAGE

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

STORAGE

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

STABILITY

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.

Image

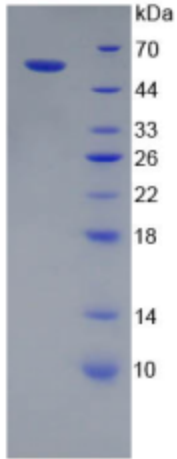


Figure. SDS-PAGE

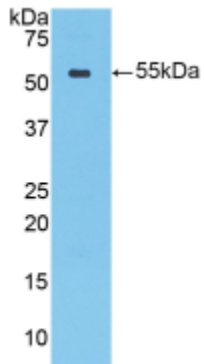


Figure. Western Blot

[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.