APJ512Hu01 100μg
Active Lactamase Beta (LACTb)
Organism Species: *Homo sapiens* (Human)
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: Leu313~Asp547
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% 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 isoelectric point: 8.6
Predicted Molecular Mass: 30.3kDa
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]

LFFKPGSQ FLYSTFGYTL LAAIVERASG CKYLDYMQKI
FHDLDMLTTV QEENEPVIYN RARFYVYNKK KRLVNTPYVD NSYKWAGGGF
LSTVGDLLKF GNAMLYGYQV GLFKNSNENL LPGYLKPETM VMMWTPVPNT
EMSWDKEGKY AMAWGVVERK QTYGSCRKQR HYASHTGGAV GASSVLLVLP
EELDTETINN KVPPRGIIVS IICNMQSVGL NSTALKIALE FDKDRSD

[ACTIVITY]

Serine beta-lactamase-like protein (LACTB),an active-site serine protease,is the only mammalian mitochondrial homolog evolved from penicillin-binding proteins and β-lactamases (PBP-βLs) in bacteria.It is localized in the mitochondrial intermembrane space, where it assembles into filaments to regulate mitochondrial membrane organization and the efficiency of essential metabolic processes. Besides,C Reactive Protein (CRP) has been identified as an interactor of LACTB, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human LACTB and recombinant dog CRP. Briefly, LACTB was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to CRP-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-LACTB 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 human LACTB and recombinant dog CRP was shown in Figure 1, the EC50 for this effect is 0.152ug/mL.

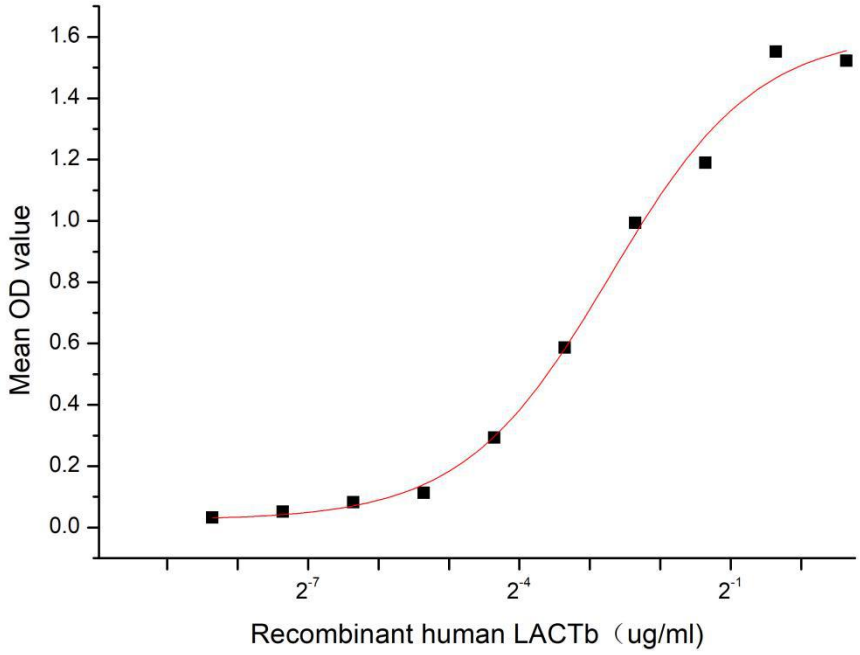

Figure 1. The binding activity of recombinant human LACTB and recombinant dog CRP

[IDENTIFICATION]

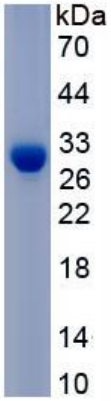

Figure 2. SDS-PAGE

Sample: Active recombinant LACTb, Human

[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.