APB310Ra01 100μg
Active Elastase 4 (ELA4)
Organism Species: Rattus norvegicus (Rat)
Instruction manual

FOR IN VITRO USE AND RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Val30~leu268
Tags: N-terminal His-tag
Purity: >95%
Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 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: 5.9
Predicted Molecular Mass: 30.2kDa
Accurate Molecular Mass: 30kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) 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 VGGEDAVPNS WPWQVSLQYL
KDDTWRHTCG GSLITTSHVL TAAHCINKDF TYRVGLGKYN LTVEDEEGSV
YAEVDTIYVH EKWNRLFLWN DIAIIKLAEP VELSNTIQVA CIPEEGSLLP
QDYPCYVTGW GRLWTNGPIA EVLQQGLQPI VSHATCSRLD WWFIKVRKTM
VCAGGDGVIS ACNGDSGGPL NCQAEDGSWQ VHGIVSFGSS SGCNVHKKPV
VFTRVSAYND WINEKIQL

[ACTIVITY]

Elastase 4 (ELA4) is a member of the peptidase S1 family. The encoded protein is a serum calcium-decreasing factor that has chymotrypsin-like protease activity. It regulates activation and degradation of trypsinogens and procarboxypeptidases by targeting specific cleavage sites within their zymogen precursors. Has chymotrypsin-type protease activity and hypocalcemic activity. Besides, Plasminogen Activator, Urokinase Receptor (uPAR) has been identified as an interactor of ELA4, thus a binding ELISA assay was conducted to detect the interaction of recombinant rat ELA4 and recombinant rat uPAR. Briefly, ELA4 were diluted serially in PBS, with 0.01%BSA (pH 7.4). Duplicate samples of 100uL were then transferred to uPAR-coated microtiter wells and incubated for 2h at 37℃. Wells were washed with PBST and incubated for 1h with anti-ELA4 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 of ELA4 and uPAR was shown in Figure 1, and this effect was in a dose dependent manner.

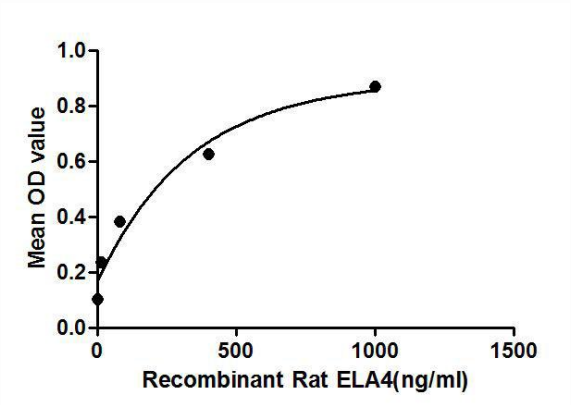

Figure 1. The binding activity of ELA4 with uPAR.

[IDENTIFICATION]

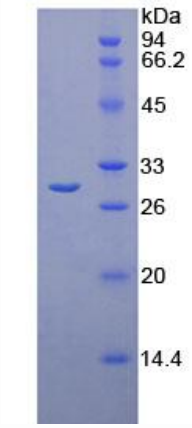

Figure 2. SDS-PAGE

Sample: Active recombinant ELA4, Rat

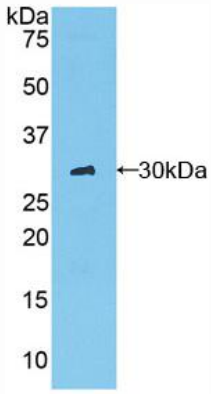

Figure 3. Western Blot

Sample: Recombinant ELA4, Rat;

Antibody: Rabbit Anti-Rat ELA4 Ab (PAB310Ra01)