APA004Hu02 100μg
Active Angiotensin I Converting Enzyme (ACE)
Organism Species: *Homo sapiens* (Human)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Ser1160~Ser1306
Tags: N-terminal His-tag
Purity: >98%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
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: 10.0
Predicted Molecular Mass: 20.2kDa
Accurate Molecular Mass: 20kDa 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 2-8°C for one month.
Aliquot and store at -80°C 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]

S KEAGQRLATA MKLGFSRPWP EAMQLITGQP NMSASAMLSY FKPLLDWLRT ENELHGEKLG WPQYNWTPNS ARSEGPLPDS GRVSFLGLDL DAQQARVGQW LLLFLGIALL VATLGLSQRL FSIRHRSLHR HSHGPQFGSE VELRHS

[ACTIVITY]

Angiotensin-converting enzyme ACE, is a central component of the renin-angiotensin system (RAS), which controls blood pressure by regulating the volume of fluids in the body. It converts the hormone angiotensin I to the active vasoconstrictor angiotensin II. Therefore, ACE indirectly increases blood pressure by causing blood vessels to constrict. ACE inhibitors are widely used as pharmaceutical drugs for treatment of cardiovascular diseases. Besides, Actin Beta (ACTb) has been identified as an interactor of ACE, thus a binding ELISA assay was conducted to detect the interaction of recombinant human ACE and recombinant human ACTb. Briefly, ACE were diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100μL were then transferred to ACTb-coated microtiter wells and incubated for 2h at 37℃. Wells were washed with PBST and incubated for 1h with anti-ACE 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 ACE and ACTb was shown in Figure 1, and this effect was in a dose dependent manner.

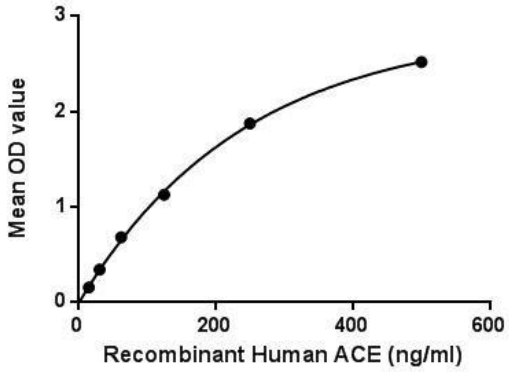

Figure 1. The binding activity of ACE with ACTb.

[IDENTIFICATION]

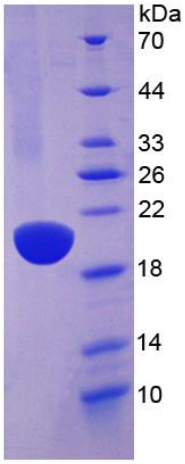

Figure 2. SDS-PAGE

Sample: Active recombinant ACE, Human

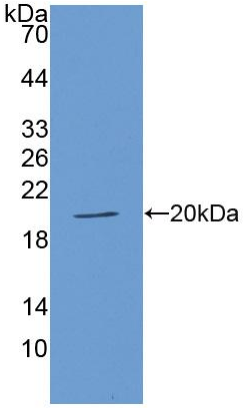

Figure 3. Western Blot

Sample: Recombinant ACE, Human;

Antibody: Rabbit Anti-Human ACE Ab (PAA004Hu02)

[IMPORTANT NOTE]

The kit is designed for in vitro and research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.