

APA889Po61 100µg

Active Renin (REN)

Organism Species: *Sus scrofa*; *Porcine* (Pig)

Instruction manual

FOR RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Eukaryotic expression.

Host: 293F cell

Residues: Met1~Arg407

Tags: N-terminal His-tag

Purity: >90%

Endotoxin Level: <1.0EU per 1µg (determined by the LAL method).

Buffer Formulation: PBS, pH7.4, containing 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: 6.4

Predicted Molecular Mass: 45.5kDa

Accurate Molecular Mass: 46kDa 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 2-8°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 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.

[SEQUENCE]

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MDRWSSMPCWGLLLVLWGSCFTGLPADTGAFSRIFLKKMPVRESLKERGVDMARLGAEWSQFSKRLSFGN
RTSPVVLNTNYLDTQYYGEIGIGTTPQTQFKVIFDTGSANLWVPSTKCSPLYTACEIHSLYDSSESSSYVENG
TEFTIHYGSGKVKGFLSQDLVTVGFTVTQTFGEVTELPPIFMLAKFDGVLGMGFPAQAVGGVTPVFDHI
LSQKVLKEDVFSVYYSRNSKNSQLLGGEIVLGGSDPQYYQDSFHYVSIKTGSWQIKMKGVSVRSATLLCE
EGCMVVVDTGASYISGPTSSLRLMETLGAKELSTDEYVVNCNQVPTLPDISFHLGGRAYTLTSADYVLQD
PYNDDLCTLALHGLDVPPPTGPVWVLGASFIKFFYTEFDRRNNRIGFALAR
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[ACTIVITY]

Renin (REN) is an enzyme protein. It is mainly secreted by the juxtaglomerular cells of the kidney. Its main function is to cleave angiotensinogen in the blood to produce angiotensin I, thereby initiating the renin-angiotensin-aldosterone system (RAAS), which plays a crucial role in regulating blood pressure and maintaining fluid and electrolyte balance in the body. Besides, Endothelin 1 (EDN1) has been identified as an interactor of REN, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant pig REN and recombinant rat EDN1. Briefly, biotin-linked REN were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to EDN1-coated microtiter wells and incubated for 1h at 37 °C. Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 30min, then wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 °C. Finally, add 50 μ l stop solution to the wells and read at 450nm immediately. The binding activity of REN and EDN1 was shown in Figure 1, the EC50 for this effect is 0.41ug/mL.

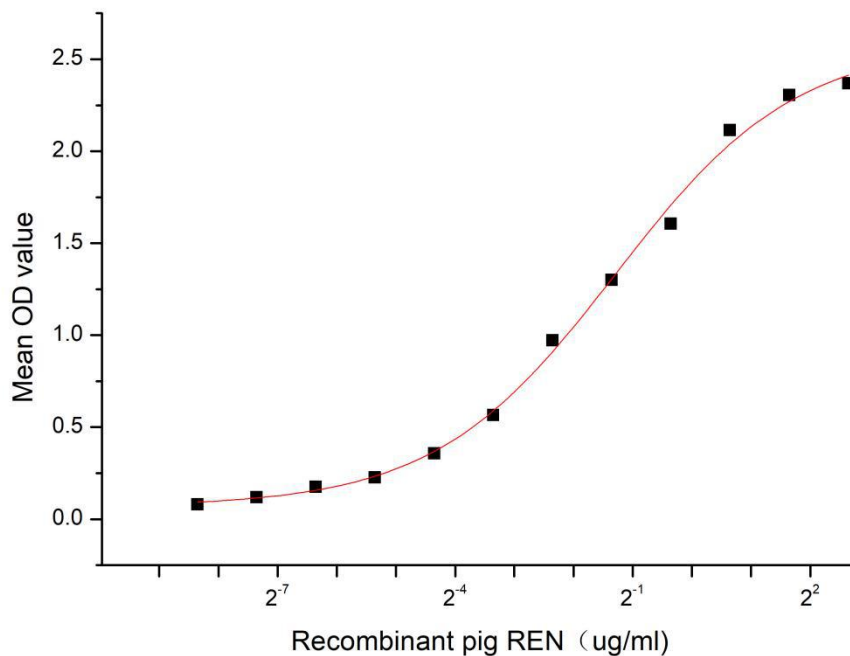


Figure 1. The binding activity of recombinant pig REN and recombinant rat EDN1

[IDENTIFICATION]

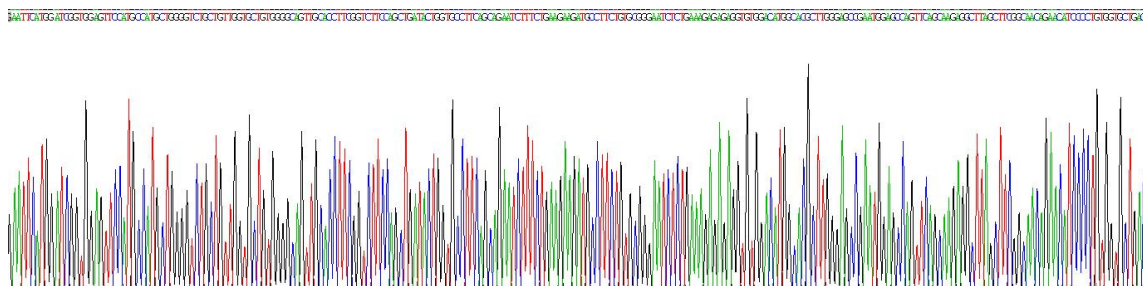


Figure 2. Gene Sequencing (extract)

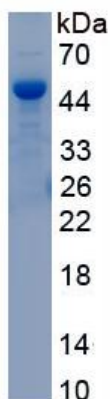


Figure 3. SDS-PAGE

Sample: Active recombinant REN, Pig

[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.