

APA876Ra01 100µg

Active Calcitonin Gene Related Peptide (CGRP)

Organism Species: *Rattus norvegicus (Rat)*

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: Met1~Val134

Tags: N-terminal His-tag

Purity: >95%

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

Buffer Formulation: PBS, pH7.4, containing 0.01% SKL, 5%Trehalose .

Original Concentration: 200µg/mL

Applications: Cell culture; Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

Predicted isoelectric point: 9.4

Predicted Molecular Mass: 16.5kDa

Accurate Molecular Mass: 16kDa 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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MDFWKFFPFL ALSSMWVLCL ASSLQAAPFR SALESSLDLG TBSDQEKHLL LAALIQDYEQ  
KARKLEQEEQ ETEGSRKGSS SSVISQKRSC NTATCVTHRL AGLLRSSGGV VKDNFVPTNV  
GSKAFGRRRR DLRV
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[ACTIVITY]

Calcitonin gene-related peptide (CGRP) is a highly potent vasoactive peptide released from sensory nerves. CGRP is a 37-amino acid and it has two major forms (α and β). It belongs to a group of peptides that all act on an unusual receptor family. These receptors consist of calcitonin receptor-like receptor (CLR) linked to an essential receptor activity modifying protein (RAMP) that is necessary for full functionality. Thus a functional binding ELISA assay was conducted to detect the interaction of recombinant rat CGRP and recombinant human RAMP2. Briefly, CGRP was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to RAMP2-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST and incubated for 1h with anti-CGRP pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37°C, 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 450/630 nm immediately. The binding activity of recombinant rat CGRP and recombinant human RAMP2 was shown in Figure 1, the EC50 for this effect is 0.06 μ g/mL.

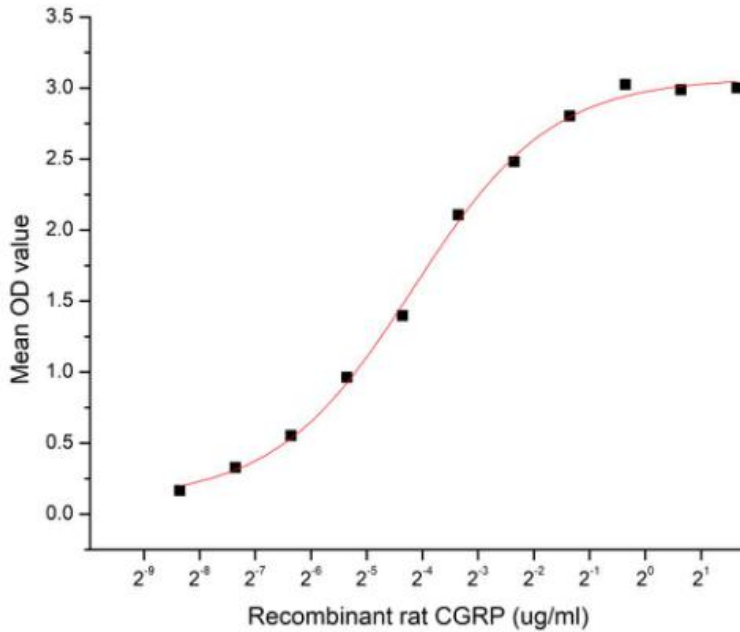


Figure 1. The binding activity of recombinant rat CGRP and recombinant human RAMP2

[IDENTIFICATION]

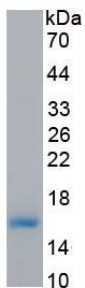


Figure 2. SDS-PAGE

Sample: Active recombinant CGRP, Rat

[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.