APC950Ra01 100μg
Active Cannabinoid Receptor 1, Brain (CNR1)
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~Gln117
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: Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 4.3
Predicted Molecular Mass: 16.9kDa
Accurate Molecular Mass: 17kDa 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]

MKSILDGLAD TTFRTITTDL LYVGSNDIQY EDIKGDMASK LGYFPQKFPL
TSFRGSPFQE KMTAGDNSPL VPAGDTTNIT EFYNKSLSSF KENEENIQCG
ENFMDMECFM ILNPSQQ

[ACTIVITY]

Cannabinoid Receptor 1, Brain (CNR1), also known as CB1 receptor, is a type of G protein-coupled receptor found predominantly in the central nervous system. It is the primary receptor for cannabinoids, the active components of cannabis, and plays a key role in the physiological and psychoactive effects of cannabis. CNR1 is primarily localized to neurons in the brain, where it is involved in various functions, including pain sensation, memory, appetite, mood, and cognition.Dopamine Receptor D2 (DRD2) can interact with CNR1 to regulate the distribution of dopamine.Thus a functional ELISA assay was conducted to detect the interaction of recombinant rat CNR1 and recombinant human DRD2.Briefly, CNR1 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to DRD2-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-CNR1 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 rat CNR1 and recombinant human DRD2 was shown in Figure 1, the EC50 for this effect is 0.43ug/mL.

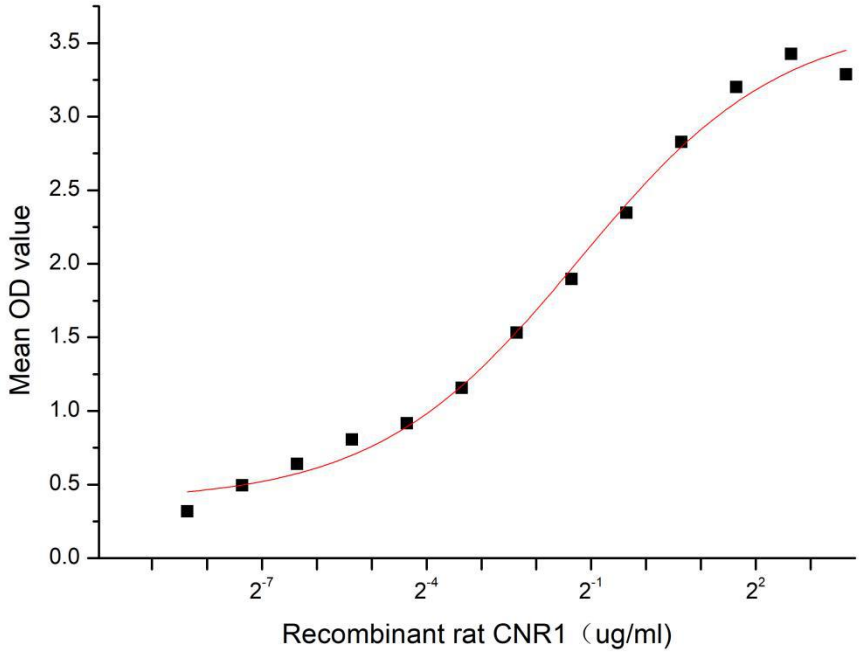

Figure 1. The binding activity of recombinant rat CNR1 and recombinant human DRD2

[IDENTIFICATION]

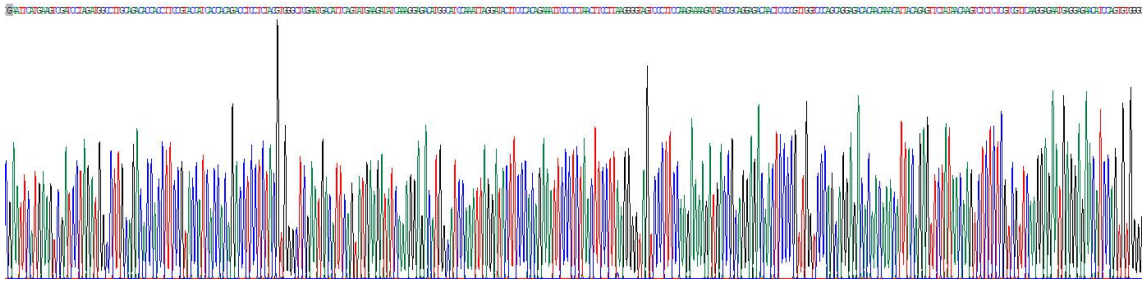

Figure 2. Gene Sequencing (extract)

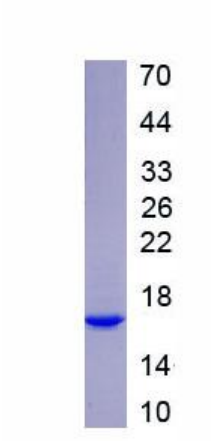

Figure 3. SDS-PAGE

Sample: Active recombinant CNR1, 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.