

**APA880Ra01 100µg**  
**Active Cluster Of Differentiation 200 (CD200)**  
**Organism Species: *Rattus norvegicus (Rat)***  
***Instruction manual***

FOR RESEARCH USE ONLY  
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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13th Edition (Revised in Aug, 2023)

## **[ PROPERTIES ]**

**Source:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Ala47~Ser271

**Tags:** N-terminal His and GST Tag

**Purity:** >90%

**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:** 8.6

**Predicted Molecular Mass:** 55.1kDa

**Accurate Molecular Mass:** 44kDa as determined by SDS-PAGE reducing conditions.

Phenomenon explanation:

The possible reasons that the actual band size differs from the predicted are as follows:

1. Splice variants: Alternative splicing may create different sized proteins from the same gene.
2. Relative charge: The composition of amino acids may affects the charge of the protein.
3. Post-translational modification: Phosphorylation, glycosylation, methylation etc.
4. Post-translation cleavage: Many proteins are synthesized as pro-proteins, and then cleaved to give the active form.
5. Polymerization of the target protein: Dimerization, multimerization etc.

## [ 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 ]

ASLR  
CSLKTTQEPL IVTWQKKKAV GPENMVTYSK AHGVVIQPTY KDRINITELG  
LLNTSITFWN TTLDDEGCYM CLFNMFSGSK VSGTACLTLY VQPIVHLHYN  
YFEDHLNITC SATARPAPAI SWKGTGSGIE NSTESHSHSN GTTSVTSILR  
VKDPKTQVGK EVICQVLYLG NVIDYKQSLD KGFWFSVPLL LSIVSLVILL  
VLISILLYWK RHRNQERGES S

## [ ACTIVITY ]

Cluster Of Differentiation 200 (CD200), also known as OX-2 or MOX1/MOX2, is a membrane glycoprotein belonging to the immunoglobulin superfamily. This protein is widely expressed in various cell types, including neurons, endothelial cells, certain immune cells (such as B cells, dendritic cells, T cell subsets), and various tumor cells. CD200 is a multifaceted protein with important roles in immune regulation, neuronal function, and disease pathogenesis. Besides, Cluster Of Differentiation 8a (CD8a) has been identified as an interactor of CD200, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant rat CD200 and recombinant human CD8a. Briefly, CD200 was diluted

serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100  $\mu$ l were then transferred to CD8a-coated microtiter wells and incubated for 1h at 37  $^{\circ}$ C . Wells were washed with PBST and incubated for 1h with anti-CD200 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37  $^{\circ}$ C , wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37  $^{\circ}$ C . Finally, add 50  $\mu$ L stop solution to the wells and read at 450/630 nm immediately. The binding activity of recombinant rat CD200 and recombinant human CD8a was shown in Figure 1, the EC50 for this effect is 0.09  $\mu$ g/mL.

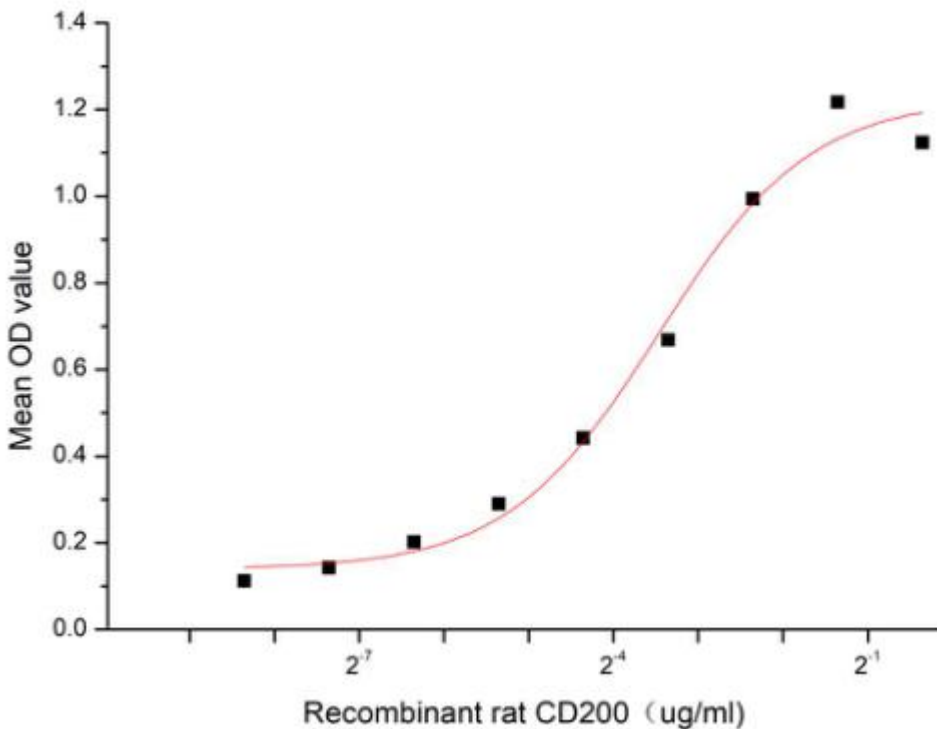
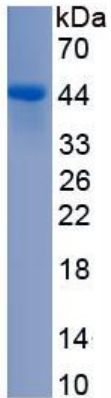


Figure 1. The binding activity of recombinant rat CD200 and recombinant human CD8a

**[ IDENTIFICATION ]**



**Figure 2. SDS-PAGE**

**Sample: Active recombinant CD200, 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.