APN341Hu61 100μg
Active CD200 Receptor 1 (CD200R1)
Organism Species: *Homo sapiens* (Human)
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: Gln29-Lys265
Tags: N-terminal His Tag and C-terminal Fc Region of Human IgG1
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: 8.4
Predicted Molecular Mass: 57.5kDa
Accurate Molecular Mass: 80kDa 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]

QPNNSLMLQTSKENHALASSSLCMDEKQITQNYSKVLAEVNTSWPVKMATNAVLCCPPIALRNL
IIITWEIILRGQPSCTKAYKKETNETKETNCTDERITWVSRPDQNSDLQIRTVAITHDGYYRCIMVT
PDGNFHRGYHLQVLVTPEVTLFQNRNRTAVCKAVAGKPAAHISWIPEGDCATKQEYWSNGTVT
VKSTCHWEVHNVSTVTCHVSHLTGNKSLYIELLPVPGAKKSAK

[ACTIVITY]

CD200 Receptor 1 (CD200R1) is a cell surface glycoprotein belonging to the immunoglobulin superfamily, primarily expressed on myeloid cells such as macrophages, monocytes, and dendritic cells, as well as on some T and B lymphocytes. It functions as a key inhibitory receptor that modulates immune responses by delivering negative signals upon ligand binding. The activation of CD200R1 is crucial for maintaining immune homeostasis and preventing excessive inflammation, as it counteracts the pro-inflammatory signals triggered by activating receptors. Dysregulation of the CD200R1 pathway has been implicated in various autoimmune diseases, inflammatory disorders, and cancers, highlighting its importance as a potential therapeutic target for immune modulation. CD200R1 binds specifically to its ligand CD200, a membrane protein expressed on a variety of cell types including neurons, endothelial cells, and lymphocytes,

forming a heterophilic interaction that inhibits myeloid cell activation.Briefly, rat CD200 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to CD200R1-coated microtiter wells and incubated for 1h at 37℃. 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℃, 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. Measured by its binding ability in a functional ELISA. When Recombinant human CD200R1 is Immobilized at 2 μg/mL(100 uLwell), the concentration of rat CD200 that produces 50% optimal bindingresponse is found to be approximately 0.594 μg/mL.

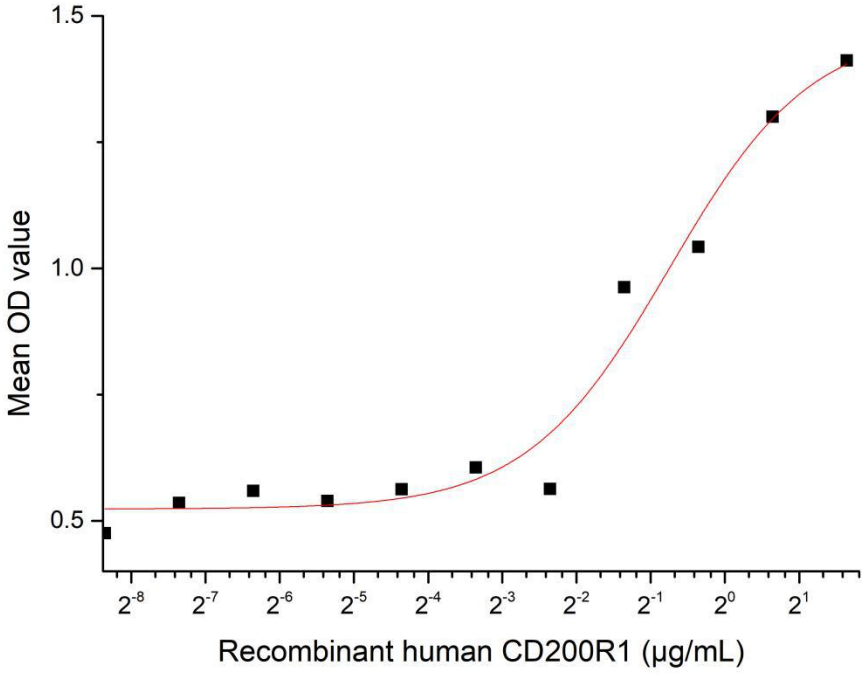


Figure 1. The binding activity of recombinant human CD200R1 and rat CD200

[IDENTIFICATION]

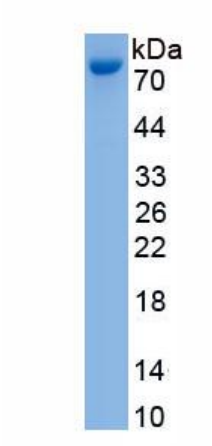


Figure 2. SDS-PAGE

Sample: Active recombinant CD200R1, Human

[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.