

**DESCRIPTION**

**Source** Human embryonic kidney cell, HEK293-derived cynomolgus monkey CD200 R1 protein  
Ala27-Leu267, with a C-terminal 6-His tag  
Accession # XP\_005548208

**N-terminal Sequence Analysis** Ala27

**Predicted Molecular Mass** 28 kDa

**SPECIFICATIONS**

**SDS-PAGE** 60-67 kDa, reducing conditions

**Activity** Measured by its binding ability in a functional ELISA.  
When Recombinant Cynomolgus Monkey CD200 R1 is coated at 0.5 µg/mL (100 µL/well), the concentration of Recombinant Human CD200 Fc Chimera (Catalog # 2724-CD) that produces 50% optimal binding response is 0.02-0.12 µg/mL

**Endotoxin Level** <0.10 EU per 1 µg of the protein by the LAL method.

**Purity** >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

**Formulation** Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

**Reconstitution** Reconstitute at 1 mg/mL in water.

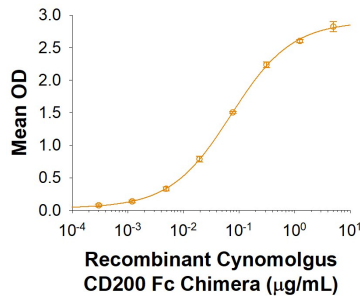
**Shipping** The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, ≤ -20 °C under sterile conditions after reconstitution.

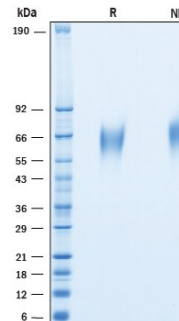
**DATA**

**Binding Activity**



When Recombinant Cynomolgus Monkey CD200 R1 (Catalog # 10055-CD) is coated at 0.5 µg/mL, 100 µL/well, Recombinant Human CD200 Fc Chimera (Catalog # 2724-CD) binds with an ED<sub>50</sub> of 0.02-0.12 µg/mL.

**SDS-PAGE**



2 µg/lane of Recombinant Cynomolgus Monkey CD200 R1 was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 60-67 kDa.

**BACKGROUND**

CD200 R1, also known as OX-2 receptor, is a 90 kDa transmembrane protein in the immunoglobulin superfamily and is important in the regulation of myeloid cell activity (1-3). The cynomolgus CD200 R1 cDNA encodes a 241 amino acid (aa) extracellular domain (ECD) and 61 aa cytoplasmic tail. The ECD is composed of one Ig-like V-type domain and one Ig-like C2-type domain (4). Within the ECD, cynomolgus CD200 R1 shares 91%, 54%, and 57% aa sequence identity with human, mouse, and rat CD200 R1, respectively. Alternate splicing of the human CD200 R1 mRNA generates four isoforms, two of which are truncated in the Ig-C2 domain and are likely secreted (5). CD200 R1 expression is restricted primarily to mast cells, basophils, macrophages, and dendritic cells (6-8), while its ligand, CD200, is widely distributed (9). Disruption of this receptor-ligand system by knockout of the CD200 gene in mice leads to increased macrophage number and activation and predisposition to autoimmune disorders (10). Association of CD200 with CD200 R1 takes place between their respective N-terminal Ig-like domains (11). CD200 R1 propagates inhibitory signals despite lacking a cytoplasmic ITIM (immunoreceptor tyrosine-based inhibitory motif) (7, 8, 12, 13). CD200R1 signaling inhibits the expression of proinflammatory molecules including TNFs, IFNs, and inducible nitric oxide synthase in response to selected stimuli, which implicate that CD200/CD200R1 inhibitory signaling pathway plays a prominent role in limiting inflammation in a wide range of inflammatory diseases (14). Furthermore, the CD200/CD200R1 inhibitory signaling constitutes one of the most suitable endogenous immunoregulatory molecule candidate to restore the immune suppressive status of the CNS altered in chronic neuroinflammatory situations (15).

**References:**

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