

# Active Recombinant Human CD200 protein, His/Avi-tagged, Biotinylated

**Cat. No.** CD200-051H    **Lot. No.** (See product label)

## SPECIFICATION

<b>Product Overview</b>	Biotinylated Recombinant Human CD200(Gln31-Lys232) protein, fused to His/Avi tag at the C-terminus, was expressed in HEK293 cells .
<b>Species</b>	Human
<b>Source</b>	HEK293
<b>ProteinLength</b>	Gln31-Lys232
<b>Description</b>	<p>Cluster of Differentiation-200 (CD200), also known as OX-2, is a transmembrane immunoregulatory protein that belongs to the immunoglobulin superfamily (1, 2). Mature human CD200 consists of an extracellular domain (ECD) with one Ig-like V-type domain and one Ig-like C2-type domain, a transmembrane segment, and a short cytoplasmic domain (3). Within the mature ECD, human CD200 shares 76% amino acid (aa) sequence identity with mouse and rat CD200. A splice variant of CD200 has been identified lacking the first 43 aa of the ECD and characterized as a functional antagonist to full-length CD200 (4). CD200 is widely expressed by numerous cell types including neurons, B cells, activated T cells, thymocytes, dendritic cells and endothelium (5). Its receptor, CD200R, is restricted primarily to mast cells, basophils, macrophages, and dendritic cells, which suggests CD200 is an important inhibitory ligand for myeloid cell regulation (6-8). CD200 knockout mice are characterized by increased macrophage number and activation and are predisposed to autoimmune disorders (9). CD200 and CD200R associate via their respective N-terminal Ig-like</p>

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domains (10). In myeloid cells, CD200R initiates inhibitory signals following receptor-ligand contact (7, 8, 11). In T cells, however, CD200 functions as a costimulatory molecule independent of the CD28 pathway (12). Several additional CD200R-like molecules have been identified in human and mouse, but their capacity to interact with CD200 is controversial (13, 14). Several viruses encode CD200 homologs which are expressed on infected cells during the lytic phase (15, 16). Like CD200 itself, viral CD200 homologs also suppress myeloid cell activity, enabling increased viral propagation (6, 15-17). Our Avi-tag Biotinylated human CD200 features biotinylation at a single site contained within the Avi-tag, a unique 15 amino acid peptide. Protein orientation will be uniform when bound to streptavidin-coated surface due to the precise control of biotinylation and the rest of the protein is unchanged so there is no interference in the protein's bioactivity.

**Predicted N Terminal** Gln31

**Form** Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.

**Bio-activity** The biotin to protein ratio is greater than 0.7 as determined by the HABA assay. Measured by its binding ability in a functional ELISA. When Recombinant Human CD200R1 Fc Chimera is immobilized at 2 µg/mL (100 µ/well), Biotinylated Recombinant Human CD200 His-tag Avi-tag binds with an ED50 of 0.1-0.6 µg/mL.

**Molecular Mass** 40-50 kDa, under reducing conditions

**Endotoxin** <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.

**Applications** Bioactivity

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**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 to -70 °C under sterile conditions after reconstitution.

**Reconstitution** Reconstitute at 500 µg/mL in PBS.

**Conjugation** Biotin

## GENE INFORMATION

**Gene Name** [CD200 CD200 molecule \[ Homo sapiens \]](#)

**Official Symbol** [CD200](#)

**Synonyms** CD200; CD200 molecule; antigen identified by monoclonal MRC OX 2 , CD200 antigen , MOX1, MOX2; OX-2 membrane glycoprotein; MRC; OX 2; CD200 antigen; MRC OX-2 antigen; antigen identified by monoclonal MRC OX-2; MOX1; MOX2; OX-2;

**Gene ID** [4345](#)

**mRNA Refseq** [NM\\_001004196](#)

**Protein Refseq** [NP\\_001004196](#)

**MIM** [155970](#)

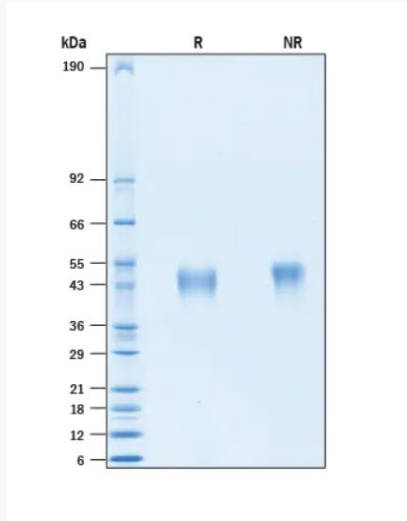
**UniProt ID** [P41217](#)

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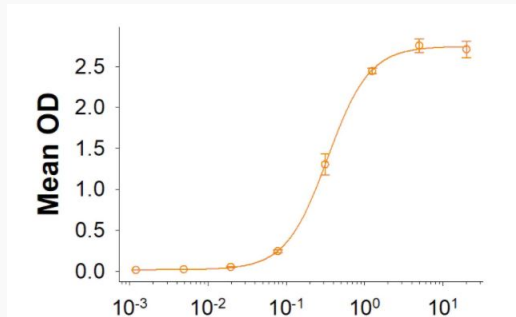
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**SDS-PAGE**



2 µg/lane Protein was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining.

**Binding Activity**



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