Active Recombinant Human CD200R1 protein, Fc-Avi-tagged, Biotinylated

Cat. No. CD200R1-051H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Biotinylated Recombinant Human CD200R1(Ala27-Leu266) protein, carries a human IgG1 Fc tag at the C-terminus, followed by a Avi tag, was expressed in CHO cells.
Species	Human
Source	CHO
ProteinLength	Ala27-Leu266
Description	Cluster of Differentiation-200 receptor 1 (CD200R1), also known as OX-2 receptor, is a transmembrane protein in the immunoglobulin superfamily expressed on the surface of myeloid cells and important in the regulation of myeloid cell activity (1-3). Mature CD200R1 consists of an extracellular domain (ECD) with one Ig-like V-type and one Ig-like C2-type domain, a transmembrane segment, and a short cytoplasmic domain (4). Despite lacking a cytoplasmic ITIM domain, CD200R1 has still been shown to propagate inhibitory signals (5, 6). Within the ECD, human CD200R1 shares 56% amino acid (aa) sequence identity with both mouse and rat CD200R1. Alternate splicing of the human CD200R1 mRNA generates four isoforms, two of which are truncated in the Ig-C2 domain and are likely secreted (4). Additionally, a separate CD200R gene encodes 1 protein in humans and 4 in mouse with high aa sequence identity with CD200R1 which are potentially activating receptors by means of their association with DAP12 (7, 8). CD200R1 expression is restricted primarily to mast cells, basophils,

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	macrophages, and dendritic cells (9-11) while its ligand, CD200, is widely distributed (12). Association of CD200 with CD200R1 takes place between their respective N-terminal Ig-like domains (13). 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 (12). 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). Further, the CD200/CD200R 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). Our Avi-tag Biotinylated CD200R1 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	Ala27
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. Recombinant Human CD200 is immobilized at 0.5 μg/mL(100 μL/well), the concentration that produces 50% of the optimal binding response is approximately 2.5-15 ng/mL. Measured by its binding ability in a functional ELISA. When Recombinant Human CD200 Fc Chimerais immobilized at 0.5 μg/mL (100 μL/well), the concentration of Biotinylated Recombinant Human CD200R1 Fc

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	Chimera Avi-tag that produces 50% of the optimal binding response is appoximately 2.5-15 ng/mL.
Molecular Mass	80-100 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
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 250 μg/mL in PBS.
Conjugation	Biotin

GENE INFORMATION

Gene Name	CD200R1 CD200 receptor 1 [Homo sapiens]
Official Symbol	CD200R1
Synonyms	CD200R1; CD200 receptor 1; MOX2 receptor , MOX2R; cell surface glycoprotein CD200 receptor 1; CD200R; HCRTR2; OX2R; MOX2 receptor; CD200 cell surface glycoprotein receptor; cell surface glycoprotein OX2 receptor 1; cell surface glycoprotein receptor CD200; MOX2R;

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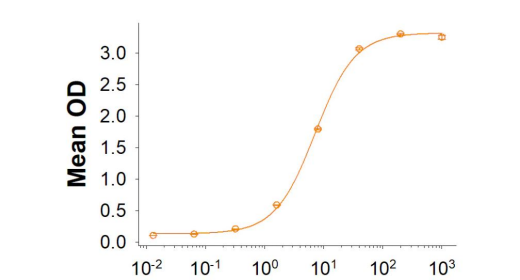
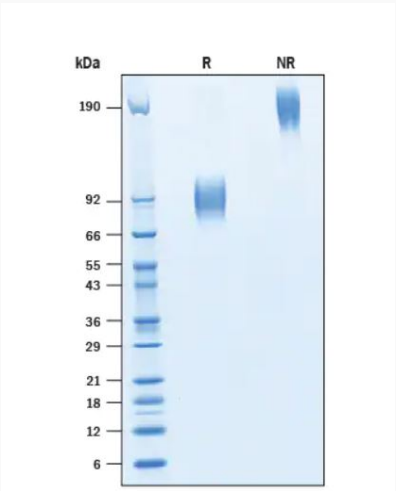
Gene ID	131450
mRNA Refseq	NM_138806
Protein Refseq	NP_620161
MIM	607546
UniProt ID	Q8TD46
Binding Activity	
SDS-PAGE	

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

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