

Biotinylated Recombinant Human CD200-Fc Chimera (carrier-free)

Catalog# / Size	770202 / 10 µg 770204 / 25 µg 770206 / 100 µg
Regulatory Status	RUO
Other Names	OX-2 membrane glycoprotein, OX-2, OX2, MRC OX-2, MOX1, MOX2, My033
Description	CD200 (OX-2) is a 45 kD cell surface glycoprotein that belongs to the immunoglobulin superfamily (IgSF). CD200 is composed of 202 amino acid extracellular domain containing two IgSF domains, 27 amino acid transmembrane segment, and a 19 amino acid cytoplasmic domain. CD200 is the only known ligand of the CD200R family and it is highly conserved in the CNS, expressed mainly by neurons and vascular endothelium. It is also present in most peripheral cell types, thymocytes, T and B cells, and dendritic cells. CD200 and CD200R interact with each other through N-terminal IgSF domains. Their interaction plays important roles in negatively regulating immune responses, and attenuating autoimmune diseases and excessive inflammatory responses against pathogens. High expression of CD200 in CNS is thought to be a mechanism of constitutive immune suppression, and is developmentally regulated in the mouse brain. Deficiency in neuronal CD200 may explain the chronic inflammation in human neurodegenerative diseases such as Alzheimer, Parkinson, and multiple sclerosis. CD200 and CD200R interaction has also been shown to play an important role in the regulation of anti-tumor immunity, and overexpression of CD200 has been reported in a number of malignancies, including CLL, as well as on cancer stem cells.

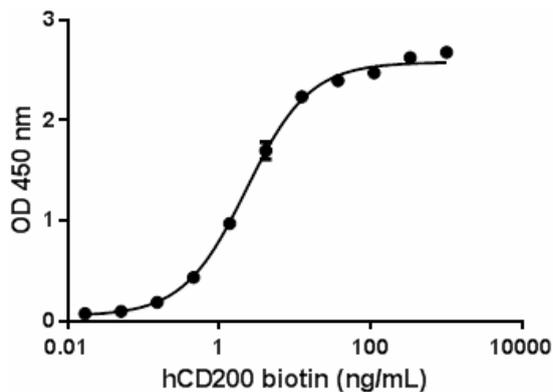
Product Details

Source	Human CD200, amino acids Gln31-Gly232 (Accession # P41217) with a C-terminal human IgG1 Fc and 6-His tag was expressed in 293E cells.
Molecular Mass	The unlabeled 446 amino acid recombinant protein has a predicted molecular mass of approximately 50 kD. The DTT-reduced protein migrates at approximately 65 kD and non-reduced protein migrates at approximately 130 kD by SDS-PAGE. The predicted N-terminal amino acid is Gln.
Purity	>95 %, as determined by Coomassie stained SDS-PAGE.
Formulation	0.22 µm filtered protein solution is in PBS, pH 7.2, 5% Glycerol
Endotoxin Level	Less than 1.0 EU per µg protein as determined by the LAL method.
Concentration	10 and 25 µg sizes are bottled at 200 µg/mL. 100 µg and larger sizes are lot-specific and bottled at the concentration indicated on the vial. To obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.
Storage & Handling	Unopened vial can be stored between 2°C and 8°C for up to 2 weeks, at -20°C for up to six months, or at -70°C or colder until the expiration date. For maximum results, quick spin vial prior to opening. The protein can be aliquoted and stored at -20°C or colder. Stock solutions can also be prepared at 50 - 100 µg/mL in appropriate sterile buffer, carrier protein such as 0.2 - 1% BSA or HSA can be added when preparing the stock solution. Aliquots can be stored between 2°C and 8°C for up to one week and stored at -20°C or colder for up to 3 months. Avoid repeated freeze/thaw cycles.
Activity	When human CD200R1 is immobilized at 0.5 µg/mL, human CD200 Biotin binds with EC ₅₀ of 1.5 – 6.0 ng/mL.
Application	Bioassay
Application Notes	BioLegend carrier-free recombinant proteins provided in liquid format are shipped on blue-ice. Our comparison testing data indicates that when handled and stored as recommended, the liquid format has equal or better stability and shelf-life compared to commercially available lyophilized proteins after reconstitution. Our liquid proteins are verified in-house to maintain activity after shipping on blue ice and are backed by our 100% satisfaction guarantee . If you have any concerns, contact us at tech@biolegend.com .

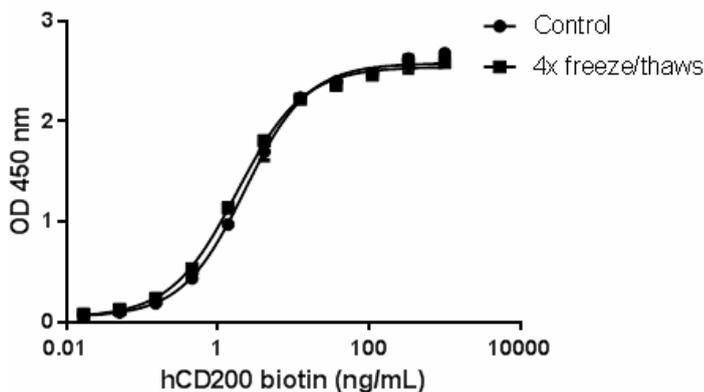
Antigen Details

Structure	Disulfide-linked homodimer, biotinylated via amines
Distribution	Neurons and vascular endothelium in CNS, and most peripheral cell types, thymocytes, T and B cells, and dendritic cells.
Function	Costimulates T-cell proliferation. May regulate myeloid cell activity in a variety of tissues.
Interaction	Mast cells, basophils, macrophages, and dendritic cells
Ligand/Receptor	CD200R
Bioactivity	Measured by it's ability to bind immobilized hCD200R1
Biology Area	Cell Biology, Costimulatory Molecules, Immunology, Neuroscience, Neuroscience Cell Markers
Molecular Family	CD Molecules, Soluble Receptors
Antigen References	<ol style="list-style-type: none">1. Hernangomez M, C. et al. 2014. <i>Curr Pharm Des.</i> 20:4707-22.2. Walker DG, Lue LF. 2013. <i>Future Neurol.</i> 10.2217/fnl.13.14.3. Wright GJ, et al. 2003. <i>J Immunol.</i> 171: 3034-46.4. Vaine CA, Soberman RJ. 2014. <i>Adv Immunol.</i> 121:191-211.5. Minas K, et al. 2006. <i>Crit Rev Immunol.</i> 26(3): 213-30.6. Wang XJ, et al. 2007. <i>J Neuroimmune Pharmacol.</i> 2(3): 259-64.7. Wong KK, et al. 2010. <i>J Leukoc Biol.</i> 88(2): 361-72.
Gene ID	4345

Product Data



When human CD200R1 is immobilized at 0.5 µg/mL, human CD200 Biotin binds with EC₅₀ of 1.5 - 6.0 ng/mL.



Human CD200 biotin was aliquoted in PBS, 5% glycerol at 0.2 mg/ml. One aliquot was freeze and thawed four times (4x freeze/thaws), and compared to a control kept at 4°C (control). The samples were tested in a binding assay with human CD200R1.

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