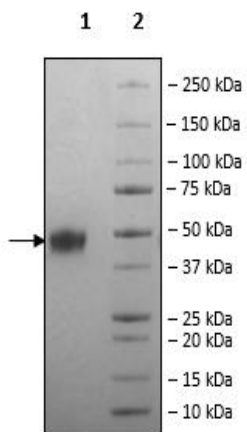


## Product Information

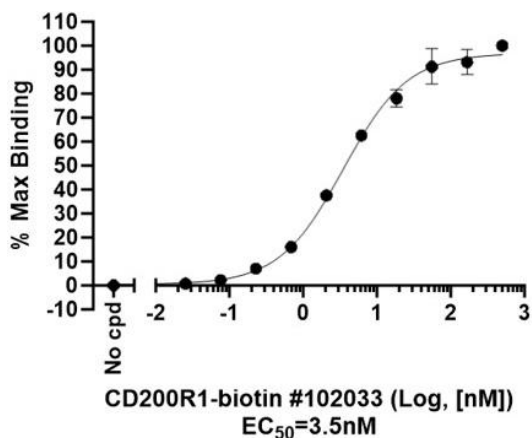
<b>Description:</b>	Recombinant human CD200 (cluster of differentiation 200), encompassing amino acids 31-232. This construct contains a C-terminal Avi-Tag™, followed by a His-tag (6xHis). This protein was affinity purified.
<b>Background:</b>	CD200 (cluster of differentiation 200), also known as OX-2, is a type 1 membrane glycoprotein of the immunoglobulin supergene family. It is structurally related to the B7 family of costimulatory receptors. It is found in cells of the myeloid and lymphoid lineage such as activated T and B cells, in neurons, endothelial cells, and cancer cells. Its expression depends on IFN- $\gamma$ (interferon gamma) and TNF- $\alpha$ (tumor necrosis factor alpha), and it is regulated by C/EBP- $\beta$ . When bound to CD200R (CD200 receptor) it contributes to the formation of an immunosuppressive TME (tumor microenvironment), via a Dok1 (docking protein 1), Dok2, and RasGAP dependent mechanism, leading to T cell responses inhibition, NK cell cytotoxicity decrease, potentiation of Treg cell expansion, and decrease of other immune responses to cancer cells. CD200 can be found in soluble form in the serum of cancer patients, linking to a poor prognosis. A splice variant missing exon 2, CD200tr, can also be formed and may act as a competitive inhibitor for full length CD200. In addition to cancer, CD200 is linked to auto-immune disorders, inflammation, infection, and graft survival. Samalizumab, an anti-CD200 monoclonal antibody, has resulted in positive outcomes when used in patients suffering from CLL (chronic lymphocytic leukemia) and MM (multiple myeloma).
<b>Species:</b>	Human
<b>Construct:</b>	CD200 (31-232-Avi-His)
<b>Concentration:</b>	1.87 mg/ml
<b>Expression System:</b>	HEK293
<b>Purity:</b>	$\geq 90\%$
<b>Format:</b>	Aqueous buffer solution.
<b>Formulated In:</b>	8 mM phosphate, pH 7.4, 110 mM NaCl, 2.2 mM KCl, and 20% glycerol
<b>MW:</b>	26 kDa + glycans
<b>Glycosylation:</b>	This protein runs at a higher MW by SDS-PAGE due to glycosylation.
<b>Genbank Accession:</b>	NM_005944.7
<b>Stability:</b>	At least 6 months at -80°C.
<b>Storage:</b>	-80°C
<b>Instructions for Use:</b>	Thaw on ice and gently mix prior to use. DO NOT VORTEX. Perform a quick spin before opening. Aliquot into small volumes and flash freeze for long term storage. Avoid multiple freeze/thaw cycles.
<b>Assay Conditions:</b>	The protein was validated by measuring CD200R1 binding to CD200 in ELISA. The CD200 protein (#102030) was coated onto a 96-well plate overnight at 4°C (50 $\mu$ l/well at a concentration of 4 $\mu$ g/ml in PBS). The plate was washed 3 times with Immuno Buffer 1 (#79311) and blocked using 100 $\mu$ l of Blocking Buffer 2 (#79728) for 1 hour at room temperature. After removing the blocking buffer, 50 $\mu$ l/well of purified CD200R1, Fc Fusion, Avi-Tag, Biotin-Labeled Recombinant (#102033), serially diluted in Blocking Buffer 2, was added for 1 hour at room temperature. After 3 more washes, the plate was incubated with Streptavidin-HRP (#79742), washed, and incubated with the Colorimetric HRP substrate. The reaction was stopped, and absorbance was read at 450 nm. The Blank value was subtracted from all values.
<b>Applications:</b>	Useful for CD200-CD200R1 binding studies.

## Quality Control Data

### 4-20% SDS-PAGE Coomassie Staining



### CD200:CD200R1-Biotin Binding Assay



### CD200:CD200R1-Biotin Neutralizing Assay

