

## Technical Data Sheet

### Biotinylated Human CD200 (C-His-Avi)

**Catalog Number:** 814603, 814604  
**Size:** 25 ug, 100 ug  
**Target Name:** CD200, MOX1, MOX2, MRC, OX-2, My033  
**Regulatory Status:** RUO

#### Product Details

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**Application:** ELISA, BLI  
**Format:** Liquid, Biotinylated  
**Expression Host:** CHO  
**Species:** Human  
**Sources:** Recombinant Human CD200 (Gln31-Gly232) with C-terminus His-Avi-tag is expressed in CHO cell. This protein was site-specifically labeled with Biotin by BirA ligase.  
**Accession Number:** P41217  
**Molecular Weight:** The protein has a predicted molecular weight of 26.1 kDa. Under DTT-reducing conditions, it migrates at approximately 35-45 kDa on SDS-PAGE.  
**Affinity Tag:** C-His-Avi  
**Purity:** >95% based on SDS-PAGE under reducing condition  
**Formulation:** 1xPBS buffer, pH7.4, 0.22 µm filtered  
**Endotoxin level:** Not tested  
**Protein Concentration:** 25µg size is bottled at 0.2mg/mL concentration. 100 µg size is supplied at a lot-specific concentration.  
**Storage and Handling:** Briefly centrifuge the vial upon receipt. An unopened vial can be stored at 4°C for up to 2 weeks, or at -20°C or below for up to six months. The protein may be further diluted to 0.1 mg/mL using 0.22 µm-filtered PBS buffer (pH 7.4). For long-term storage, the diluted stock solution should be aliquoted and stored at ≤ -70°C to minimize freeze-thaw cycles. If additional dilution is required, carrier proteins such as FBS or BSA should be added to maintain protein stability.

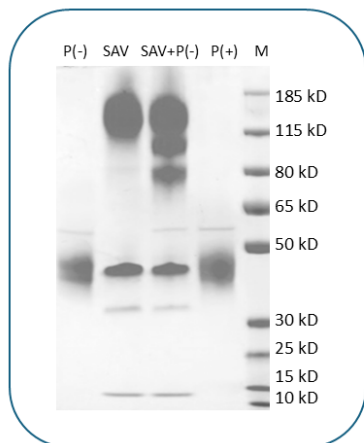
#### Background Information

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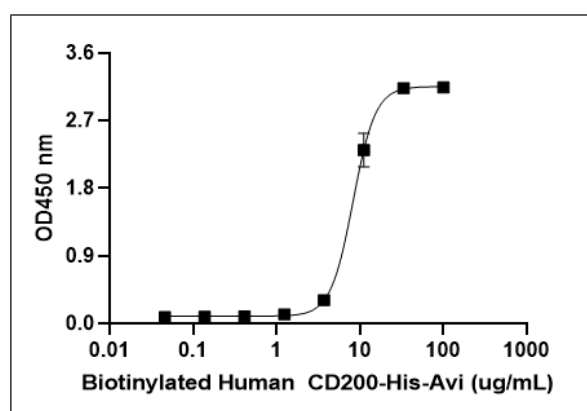
CD200 (OX-2) is a cell surface glycoprotein that regulates immune responses through its receptor, CD200R, mainly expressed on myeloid cells. It plays a crucial role in suppressing alloimmune and autoimmune responses, contributing to immune privilege in various tissues. CD200-CD200R signaling is essential in regulating anti-tumor immunity, with overexpression linked to malignancies like chronic lymphocytic leukemia (CLL) and cancer stem cells. Additionally, CD200 signaling is involved in the central nervous system, particularly in diseases like Parkinson's, where it affects microglia activation. Elevated CD200 expression is associated with reduced transplant rejection, autoimmunity, and allergic diseases, but may also promote tumor cell survival. While it helps prevent graft rejection and autoimmune diseases, high CD200 levels in cancers have been linked to poor prognosis. This dual role underscores the complexity of CD200 in immune regulation and its potential

as both a therapeutic target and a biomarker.

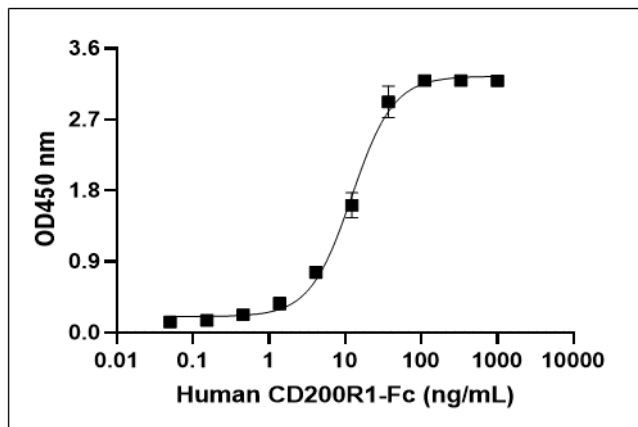
## Product Data



Human CD200 Protein (C-His-Avi) was biotinylated in vitro using BirA ligase. SDS-PAGE analysis under reducing (P+) and non-reducing (P-) conditions shows the protein has a purity greater than 95%. A gel shift assay using co-incubation with streptavidin indicates that the biotinylation efficiency of Human CD200 protein exceeds 80%.



Human CD200R (C-Fc) is coated at 20ug/mL (2000 ng/well). Biotinylated Human CD200 (C-His-Avi) can bind human CD200R in a dose-dependent manner with the ED50 of 3-15 ug /mL



Biotinylated Human CD200 (C-His-Avi) is coated at 2 ug/mL (200ng/well). Human CD200R (C-Fc) can bind Biotinylated Human CD200 (C-His-Avi) in a dose-dependent manner with the ED50 of 10-50 ng/mL