

Human Recombinant CD200

Cluster of differentiation 200, His tag

Catalog #100-1338

100 µg

Product Description

Cluster of differentiation 200 (CD200), also known as OX-2, is a type 1 membrane glycoprotein belonging to the immunoglobulin superfamily. CD200 contains two immunoglobulin-like domains: a V-type domain and a smaller C2-type domain (Hatherley et al.). It contains a His-residue tag at the carboxyl end of the polypeptide chain. CD200 interacts with the CD200 receptor (CD200R), expressed on the surface of myeloid cells and T cells (Wright et al.). In vitro studies show CD200-CD200R interaction inhibits myeloid cell activity and macrophage cytokine production (Jenmalm et al.). Homologues of CD200 have been identified in viruses and can interact with CD200R to reduce macrophage pro-inflammatory cytokine production (Foster-Cuevas et al.). Studies have shown that the immunosuppressive effects of CD200 can promote acceptance of allogeneic tissue grafts in hosts (Gorcynski et al.). Dysregulation of CD200/CD200R can contribute to the development of autoimmune conditions, such as rheumatoid arthritis (Ren et al.).

Product Information

Alternative Names:	MOX1, MOX2, MRC, OX2, OX-2
Accession Number:	NP_005935.4 (Gln31-Gly232) was expressed with a polyhistidine tag at the C-terminus.
Amino Acid Sequence:	QVQVVTQDER EQLYTPASLK CSLQNAQEAL IVTWQKKKAV SPENMVTFSE NHGVVIQPAY KDKINITQLG LQNSTITFWN ITLEDEGCYM CLFNTFGFGK ISGTACLTYY VQPIVSLHYK FSEDHLNITC SATARPAPMV FWKVPVRSGIE NSTVTLSHPN GTTSVTSILH IKDPKNQVGK EVICQVLHLG TVTDFKQTVN KGAAHHHHHHHH HHH
Predicted Molecular Mass:	24 kDa
Species:	Human
Product Formulation:	Lyophilized from sterile PBS, pH 7.4. Trehalose (5%), mannitol (5%), and 0.01% TWEEN® 80 are normally added as protectants before lyophilization.
Source:	HEK293 cells
Purity:	≥ 90%

Specifications

Activity:	Binding ability was measured in a functional ELISA. Immobilized Human Recombinant CD200 at 2 µg/mL can bind human CD200R (His & hFc tag) with a linear range of 5 - 28 ng/mL.
Endotoxin Level:	Measured by kinetic Limulus amebocyte lysate (LAL) analysis and is ≤ 1 EU/µg protein.

Preparation and Storage

Stability and Storage: Store at -20 to -80°C. Stable as supplied for 12 months from date of receipt.

Preparation: Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.25 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. As a general guide, do not store at 2 - 8°C for more than 1 month or at -80°C for more than 3 months. Avoid repeated freeze-thaw cycles.

Data

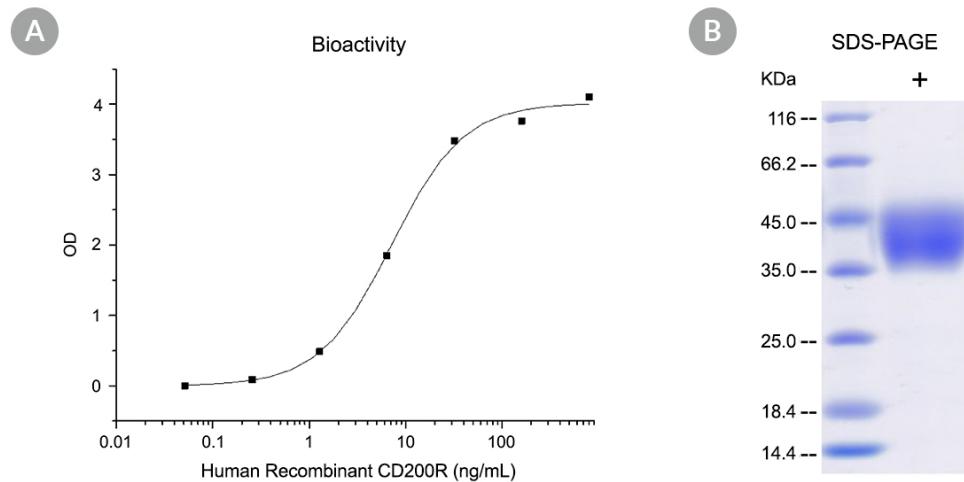


Figure 1. Binding Activity and Molecular Mass of Human Recombinant CD200

(A) The binding activity of Human Recombinant CD200 was tested by functional ELISA with immobilized Human Recombinant CD200 at 2 µg/mL. Immobilized Human Recombinant CD200 can bind human CD200R (His & hFc tag) with a linear range of 5 - 28 ng/mL.

(B) Human Recombinant CD200 was resolved with SDS-PAGE under reducing (+) conditions and visualized by Coomassie Blue staining. Human Recombinant CD200 has a predicted molecular mass of 24 kDa and an apparent molecular mass of 40 - 45 kDa due to glycosylation.

Related Products

For a complete list of cytokines or peptide pools, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/cytokines, or contact us at techsupport@stemcell.com.

References

Foster-Cuevas M et al. (2004) Human herpesvirus 8 K14 protein mimics CD200 in down-regulating macrophage activation through CD200 receptor. *J Virol* 78(14): 7667-76.

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Hatherley D et al. (2013) Structures of CD200/CD200 receptor family and implications for topology, regulation, and evolution. *Struct Eng* 1993 21(5): 820-32.

Jenmalm MC et al. (2006) Regulation of myeloid cell function through the CD200 receptor. *J Immunol* 176(1): 191-9.

Ren Y et al. (2015) Aberrant CD200/CD200R1 expression and its potential role in Th17 cell differentiation, chemotaxis and osteoclastogenesis in rheumatoid arthritis. *Rheumatology* 54(4): 712-21.

Wright GJ et al. (2003) Characterization of the CD200 receptor family in mice and humans and their interactions with CD200. *J Immunol* 171(6): 3034-46.

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