Cytokines

Human Recombinant CD200

Cluster of differentiation 200, His tag

Catalog #100-1338

100 µg

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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 (Gorczynski 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 ISGTACLTVY VQPIVSLHYK FSEDHLNITC SATARPAPMV FWKVPRSGIE NSTVTLSHPN GTTSVTSILH IKDPKNQVGK EVICQVLHLG TVTDFKQTVN KGAHHHHHHH HHH
Predicted Molecular Mass:	24 kDa
Species:	Human
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

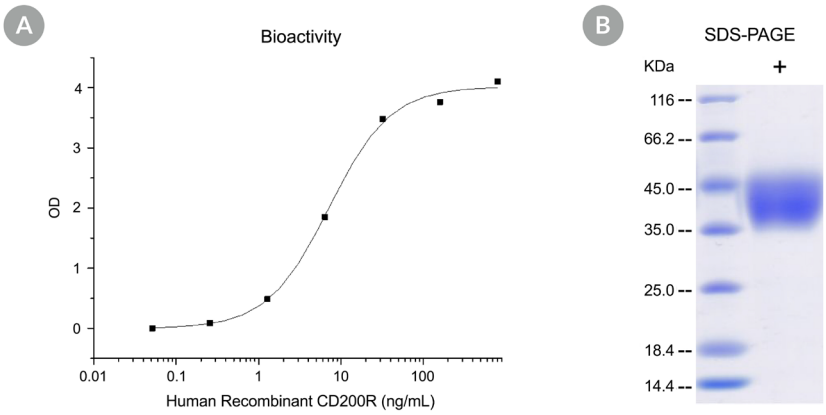
Specifications

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.
Purity:	≥ 95%
Endotoxin Level:	Measured by kinetic Limulus amebocyte lysate (LAL) analysis and is ≤ 1 EU/µg protein.

Preparation and Storage

Storage:	Store at -20 to -80°C.
Stability:	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



(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, 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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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.