Data Sheet (Cat.No.TMPY-05638)

TargetMol

CD200 Protein, Human, Recombinant (hFc & Avi)

General Information

Synonyms: MRC;MOX2;Cd200 molecule;OX2;MOX1;OX-2

Protein Construction: A DNA sequence encoding the human CD200 (NP_005935.4) (Met1-Gly232) was expressed with a C-terminal Fc region of human IgG1 tag followed by an AVI tag. The expressed protein was biotinylated in vivo by the Biotin-Protein ligase (BirA enzyme) which is co-expressed. Predicted N terminal: Gln 31

Species: Human

Expression Host: HEK293 Cells

Accession: P41217-2

Molecular Weight: 51 kDa (predicted)

QC Testing

Biological Activity: Immobilized Human CD200R His at 2 μg/mL (100 μL/well) can bind Human CD200 (ECD, hFc & AVI Tag), Biotinylated , the EC50 is 4-20 ng/mL.

Purity: ≥ 95 % as determined by SDS-PAGE. ≥ 95 % as determined by SEC-HPLC.

Endotoxin: < 1.0 EU/μg of the protein as determined by the LAL method.

Formulation: Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

CD200 (OX-2) is a cell surface glycoprotein that imparts immune privileges by suppressing alloimmune and autoimmune responses through its receptor, CD200R, expressed primarily on myeloid cells. Signals delivered through the CD200:CD200R axis have 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. The role of CD200-CD200R signaling in immune regulation of the central nervous system has become a popular field of research in recent years. Many studies have shown that there is a close correlation between CD200-CD200R, microglia activation, and Parkinson's disease (PD). The ability of CD200 to suppress myeloid cell activation is critical for maintaining normal tissue homeostasis but may also enhance the survival of migratory neoplastic cells. CD200 and CD200R associate via their respective N-terminal Ig-like domains. CD200 has been characterized as an important immunoregulatory molecule, increased expression of which can lead to decreased transplant rejection, autoimmunity, and allergic disease. Elevated CD200 expression has been reported to be associated with poor prognosis in some human malignancies. Besides, CD200 also plays an important role in prevention of graft rejection, autoimmune diseases and spontaneous abortion.Cancer ImmunotherapyImmune CheckpointImmunotherapyTargeted Therapy

Reference

Minas K,et al.(2006) Is the CD200/CD200 receptor interaction more than just a myeloid cell inhibitory signal? Crit Rev Immunol. 26(3): 213-30.

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Wong KK,et al.(2010) The role of CD200 in immunity to B cell lymphoma. J Leukoc Biol. 88(2): 361-72.

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