Data Sheet (Cat.No.TMPY-01591)

TargetMol

CD200RLa Protein, Human, Recombinant (His)

General Information

Synonyms:	CD200R2;CD200RLa;CD200 receptor 1 like
Protein Construction:	A DNA sequence encoding the human CD200R1L (AAT00538.1) extracellular domain (Met1-Leu239) was expressed, fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Gly 24
Species:	Human
Expression Host:	HEK293 Cells
Accession:	AAT00538.1
Molecular Weight:	25.2 kDa (predicted); 45-60 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
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

Cell surface glycoprotein CD2 receptor 2, also known as Cell surface glycoprotein CD2 receptor 1-like, Cell surface glycoprotein OX2 receptor 2, CD2 receptor-like 2, CD2Rla, CD2R1L and CD2R2, is a single-pass type I membrane protein which belongs to theCD2R family. CD2R1L / CD2R2. It contains oneIg-like C2-type (immunoglobulin-like) domain and oneIg-like V-type (immunoglobulin-like) domain. CD2 is a transmembrane protein delivering

immunoregulatory signals after engagement of CD2R. A family of CD2Rs exist (CD2R1, CD2R2, CD2R3, CD2R4) with different tissue expression and functional activity. In the presence of anti-CD2R2 / CD2R3 monoclonal antibodies (mAbs), bone-marrow cells cultured in the presence of (interleukin [IL]-4+granulocyte-macrophage colony-stimulating factor) differentiate into dendritic cells (DCs), which induce CD4+CD25+ Treg. Interaction between the relatively ubiquitously expressed molecule CD2 and one of its receptors, CD2R1, resulted in direct suppression of alloreactivity, engagement of alternate receptors led instead to altered differentiation of dendritic cells (DCs) from marrow precursors, which could in turn foster development of Foxp3(+) regulatory T cells. Unlike anti-CD2R1, anti-CD2R2 both promotes development of DCs with capacity to induce Treg and directly augments thymocyte production of Treg.

Reference

Wright G.J.,et al.,(2003), Characterization of the CD200 receptor family in mice and humans and their interactions with CD200. J. Immunol. 171:3034-3046.

Gorczynski R.M.,et al., (2004), Structural and functional heterogeneity in the CD200R family of immunoregulatory molecules and their expression at the feto-maternal interface.Am. J. Reprod. Immunol. 52:147-163.

Muzny D.M.,et al.,(2006), The DNA sequence, annotation and analysis of human chromosome 3.Nature 440:1194-1198.

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