Data Sheet (Cat.No.TMPY-06881)

TargetMol

CLEC12A/MICL/CLL-1 Protein, Human, Recombinant (Avi & Fc), Biotinylated

General Information

Synonyms:	MICL;PRO34150;CLL1;DCAL-2;CD303;CLL-1;CD371;CLECSF7;DLEC;HECL;CLECSF11;C-type lectin domain family 12, member A
Protein Construction:	A DNA sequence encoding the human CLEC12A (EAW96132.1) (His75-Ala275) was expressed with a N-terminal AVI tag followed by a Fc region of human IgG1 tag. The expressed protein was biotinylated in vivo by the Biotin-Protein ligase (BirA enzyme) which is co-expressed.. Predicted N terminal: Gly
Species:	Human
Expression Host:	HEK293 Cells
Accession:	EAW96132.1
Molecular Weight:	51.61 kDa (predicted); 68.81 kDa (reducing conditions)

QC Testing

Biological Activity:	Immobilized anti-CLL-1, Human IgG1 at 2 μg/mL (100 μL/well) can bind Recombinant Human CLEC12A Protein (Avi & Fc Tag), Biotinylated (Cat#TMPY-06881), the EC50 is 0.8-2.4 ng/mL.
Purity:	≥ 90 % as determined by SDS-PAGE. ≥ 90 % 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

CLEC12A is a member of the C-type lectin/C-type lectin-like domain (CTL/CTLD) superfamily. Members of this family share a common protein fold and have diverse functions, such as cell adhesion, cell-cell signaling,

glycoprotein turnover, and roles in inflammation and immune response. CLEC12A is a negative regulator of granulocyte and monocyte function. Several alternatively spliced transcript variants of this gene have been described, but the full-length nature of some of these variants has not been determined. C-type lectins are the most diverse and prevalent lectin family in immunity. Using a novel CLEC12A -specific monoclonal antibody, experiments had shown that human CLEC12A was expressed primarily on myeloid cells, including granulocytes, monocytes, macrophages, and dendritic cells. Although CLEC12A was highly N-glycosylated in primary cells, the level of glycosylation was found to vary between cell types. CLEC12A surface expression was down-regulated during inflammatory/activation conditions in vitro, as well as during an in vivo model of acute inflammation. This suggests that CLEC12A may be involved in the control of myeloid cell activation during inflammation.

Reference

Lahoud MH,et al.(2009) The C-type lectin Clec12A present on mouse and human dendritic cells can serve as a target for antigen delivery and enhancement of antibody responses. J Immunol. 182(12): 7587-94.
Pyz E,et al.(2008) Characterisation of murine MICL (CLEC12A) and evidence for an endogenous ligand. Eur J Immunol. 38(4): 1157-63.
Marshall AS,et al.(2006) Human MICL (CLEC12A) is differentially glycosylated and is down-regulated following cellular activation. Eur J Immunol. 36(8): 2159-69.