



LD Biopharma, Inc.
7384 Trade Street, Suite B
San Diego, CA 92121
Tel: 858-876-8266
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human CD303 Protein
Catalog Number: hRP-2285
Manufacturer: LD Biopharma, Inc.

Introduction

Human CD303 (also named as CLEC4C) gene encodes a lectin-type cell surface receptor which may play a role in antigen capturing by dendritic cells. CD303 specifically recognizes non-sialylated galactose-terminated biantennary glycans containing the trisaccharide epitope Gal(beta1-3/4)GlcNAc(beta1-2)Man, and it Binds to serum IgG. CD303 efficiently targets ligand into antigen-processing and peptide-loading compartments for presentation to T-cells. CD303 may mediate potent inhibition of induction of IFN-alpha/beta expression in plasmacytoid dendritic cells. It may act as a signaling receptor that activates protein-tyrosine kinases and mobilizes intracellular calcium.

Full-length extracellular domain of human CD303 cDNA (45 – 213aa, Isoform-I, derived from BC074967) was constructed with codon optimization gene synthesis and expressed with a human alpha Fetal Protein N-terminal (AFPn) -His-TEV cleavage site Tag (217aa) fusion at its N-terminal. This protein was expressed in E. coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: CD303 (CLEC4C; BDCA2; DLEC; HECL; PRO34150)
Accession Number: NP_569708
Species: Human
Size: 20 µg / Vial
Composition: 0.2 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose and DTT.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References



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Jegouzo SA, et al., *A Novel Mechanism for Binding of Galactose-terminated Glycans by the C-type Carbohydrate Recognition Domain in Blood Dendritic Cell Antigen 2*. J. Biol. Chem. 290 (27), 16759-16771 (2015)

Yu H, et al. *Human BDCA2+CD123+CD56+ dendritic cells (DCs) related to blastic plasmacytoid dendritic cell neoplasm represent a unique myeloid DC subset*. Protein Cell 6 (4), 297-306 (2015)

Nagae M, et al., *Crystal structures of carbohydrate recognition domain of blood dendritic cell antigen-2 (BDCA2) reveal a common domain-swapped dimer*. Proteins 82 (7), 1512-1518 (2014)

Chappell CP, et al., *Targeting antigens through blood dendritic cell antigen 2 on plasmacytoid dendritic cells promotes immunologic tolerance*. J. Immunol. 192 (12), 5789-5801 (2014)

Applications

1. May be used for in vitro CD303 mediated immune-modulator activities regulation study for DC/T interaction with this protein either as soluble factor or as coating matrix protein.
2. May be used for protein-protein interaction assay.
3. Potential therapeutic/diagnostic protein, which may be used as immune-modulator (recombinant CD303 or anti-CD303 antibody) for various diseases.
4. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MTLHRNEYGIASILDSYQCTAEISLADLATIFFAQFVQEATYKEVSKMVKDALTAIEKPTGDEQ
SSGCLLENQLPAFLLEELCHEKEILEKYGHSDCCSQSEEGRHNCFLAHKKPTPASIPLFQVPEPVT
SCEAYEEDRETFMNKF IYEIARRHPFLYAPTILLWAARYDKIIPSCCKAENAVECFQTKAATVT
KELRESSGGSHHHHHHGSENLYFQGFMYSKTVKRLSKLREYQQYHPSLTCVMEGKDIEDWSCCP
TPWTSFQSSCYFISTGMQSWTKSQKNCSVMGADLVVINTREEQDFIIQNLRNSSFYFLGLSDPG
GRRHWQWVDQTPYNENVTFWHSGEPNLDERCAIINFRSSEEWGWNDIHCHVPQKSICKMKKIY
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