



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human CD301 Protein
Catalog Number: hRP-2286
Manufacturer: LD Biopharma, Inc.

Introduction

Human CD301 (also named as CLEC10A) encodes a C-type lectin domain family 10 member A protein, which probable role in regulating adaptive and innate immune responses. CD301 binds in a calcium-dependent manner to terminal galactose and N-acetylgalactosamine units, linked to serine or threonine. These sugar moieties are known as Tumor-Antigen (Tn-Ag) and are expressed in a variety of carcinoma cells.

Full-length extracellular domain of human CD301 cDNA (61 – 256aa, Isoform-III, derived from BC027858) 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: CD301 (CLEC10A; MGL; HML; CLECSF13)
Accession Number: Q8IUN9-3
Species: Human
Size: 50 µg / Vial
Composition: 0.5 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

Gaur P, et al., *Intermediate monocytes are increased in enthesitis-related arthritis, a category of juvenile idiopathic arthritis.* Clin. Exp. Immunol. 187 (2), 234-241 (2017)



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Lenos K, et al., *MGL ligand expression is correlated to BRAF mutation and associated with poor survival of stage III colon cancer patients* Oncotarget 6 (28), 26278-26290 (2015)

Zizzari IG, et al., *The Macrophage Galactose-Type C-Type Lectin (MGL) Modulates Regulatory T Cell Functions*. PLoS ONE 10 (7), E0132617 (2015)

van Vliet SJ, et al., *Human T cell activation results in extracellular signal-regulated kinase (ERK)-calcineurin-dependent exposure of Tn antigen on the cell surface and binding of the macrophage galactose-type lectin (MGL)*. J. Biol. Chem. 288 (38), 27519-27532 (2013)

Applications

1. May be used for in vitro CD301 mediated immune-modulator activities regulation study for Macrophage/T cells 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 CD301 or anti-CD301 antibody) for various diseases.
4. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MTLHRNEYGIASILDSYQCTAEISLADLATIFFAQFVQEATYKEVSKMVKDALTAIEKPTGDEQ
SSGCLLENQLPAFLLEELCHEKEILEKYGHSDCCSQSEEGRHNCFLAHKKPTPASIPLFQVPEPVT
SCEAYEEDRETFMNFYIYEIARRHPFLYAPTILLWAARYDKIIPSCCKAENAVECFQTKAATVT
KELRESSGGSHHHHHHGS~~ENLYFQG~~QNSKFQ~~RD~~LVTLR~~T~~DFSNFTSNTVAEIQALTSQGSLEE
TIASLKA~~EV~~EGFRQERQAVHSEMLLRVQQLVQDLK~~KL~~T~~C~~QVATLNNNA~~ST~~EGTCCPVNWVEHQD
SCYWF~~SH~~SGMSWAEAEKYCQLKNAHLVVINSR~~EE~~QVRASGTQFLRHVPFREMVLKLGRTLESSG
SFQNDCHLCHTLRDLIGLSIQRNI~~SK~~LLS