



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human CD305 Protein
Catalog Number: hRP-1363
Manufacturer: LD Biopharma, Inc.

Introduction

The protein encoded by human leukocyte-associated immunoglobulin-like receptor 1 (CD305) gene is an inhibitory receptor found on peripheral mononuclear cells, including NK cells, T cells, and B cells. Inhibitory receptors regulate the immune response to prevent lysis of cells recognized as self. Human CD305 is a member of both the immunoglobulin superfamily and the leukocyte-associated inhibitory receptor family. Human CD305 gene maps to a region of 19q13.4 called the leukocyte receptor cluster, which contains at least 29 genes encoding leukocyte-expressed receptors of the immunoglobulin superfamily. Recent data demonstrated that CD305 activities may be involved in systemic lupus disease development.

Full-length human CD305 extracellular domain cDNA (22-165aa, derived from BC027899) was constructed with a human Alpha-Fetal Protein N-terminal domain (AFPn)-His-TEV cleavage site (219aa) fusion at its N-terminal. This protein is 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: CD305 (LAIR-1)
Accession Number: NP_002278
Species: Human
Size: 50 µg / Vial
Composition: 1.0 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, arginine, DTT and Glycerol.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

Colombo, B.M., et al., *Defective expression and function of the leukocyte associated Ig-like receptor 1 in B lymphocytes from systemic lupus erythematosus patients*. PLoS ONE 7 (2),



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E31903 (2012)

Rygiel, T.P., et al., *Tumor-expressed collagens can modulate immune cell function through the inhibitory collagen receptor LAIR-1*. Mol. Immunol. 49 (1-2), 402-406 (2011)

Xue, J., et al., *Leukocyte-associated immunoglobulin-like receptor-1 is expressed on human megakaryocytes and negatively regulates the maturation of primary megakaryocytic progenitors and cell line*. Biochem. Biophys. Res. Commun. 405 (1), 128-133 (2011)

Applications

1. May be used for in vitro human CD305 mediated leukocyte regulation study with this protein as either coating matrix protein or soluble factor.
2. May be used for CD305 protein-protein interaction assay.
3. As potential diagnostic biomarker for systemic Lupus.
4. As antigen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MTLHRNEYGIASILDSYQCTAEISLADLATIFFAQFVQEATYKEVSKMVKDALTAIEKPTGDEQ
SSGCLLENQLPAFLLEELCHEKEILEKYGHSDCCSQSEGRHNCFLAHKKPTPASIPLFQVPEPVT
SCEAYEEDRETFMKNFIYEIARRHPFLYAPTILLWAARYDKIIPSCCKAENAVECFQTKAATVT
KELRESSGGSHHHHHHGSENLYFQGEFQEEDLPRPSISAEPGTVIPLGSHVTFVCRGPGVGVQTF
RLERESRSTYNDTEDVSQASPSESEARFRIDSVSEGNAGPYRCIYYKPPKWSEQSDYLELLVKE
TSGGPDSPDTEPGSSAGPTQRPSDNSHNEHAPASQGLKAEHLY