



LD Biopharma, Inc.
9924 Mesa Rim Road Suite B
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<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human CD106 Protein
Catalog Number: hRP-0553
Manufacturer: LD Biopharma, Inc.

Introduction

Human vascular cell adhesion protein 1 (VCAM-1, CD106) gene is a member of the Ig superfamily and encodes a cell surface sialoglycoprotein expressed by cytokine-activated endothelium. This type I membrane protein mediates leukocyte-endothelial cell adhesion and signal transduction, and may play a role in the development of atherosclerosis and rheumatoid arthritis. Three alternatively spliced transcripts encoding different isoforms have been described for this gene.

Full-length recombinant human CD166 extracellular domain cDNA (25 - 698 aa, Isoform a) was constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal and 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: CD106 (VCAM-1; INCAM-100)
Accession Number: NP_001069
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

Bandyopadhyay,S., et al., *HOXA9 methylation by PRMT5 is essential for endothelial cell expression of leukocyte adhesion molecules*. Mol. Cell. Biol. 32 (7), 1202-1213 (2012)



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Reinhold, S.W., et al., *Elevated urinary sVCAM-1, IL6, sIL6R and TNFR1 concentrations indicate acute kidney transplant rejection in the first 2 weeks after transplantation. Cytokine* 57 (3), 379-388 (2012)

Lu, X., et al., *VCAM-1 promotes osteolytic expansion of indolent bone micrometastasis of breast cancer by engaging alpha4beta1-positive osteoclast progenitors. Cancer Cell* 20 (6), 701-714 (2011)

Applications

1. May be used for in vitro various cell type differentiation and integrin binding regulation study coating with this protein.
2. May be used for protein-protein interaction assay.
3. As potential biomarker protein for organ transplantation rejection / diagnostic development.
4. As antigen for specific antibody production.

Quality Control

1. Purity: > 90% by SDS-PAGE.

Suggested Coating Protocol

Standard coating was performed using 1ml PBS / well, which contains 5-10 ug protein / well) for incubating at 4°C overnight. After coating, remove PBS solution, the plate is ready for cell culture study.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHGNLYFQGGEFFKIEETTPESRYLAQIGDSVSLTCSTTGCEPFFSW
RTQIDSPLNGKVTNEGTTSTLTMNPVSFGNEHSYLCTATCESRKLEKGIQVEIYSFPKDPEIHL
SGPLEAGKPITVKCSVADVYPFDRLEIDLLKGDHLMKSQEFLEDADRKSLETKSLEVTFTPVIE
DIGKVLVCRAKLHIDEMDSVPTVRQAVKELQVYISPKNTVISVNPSTKLQEGGSVTMTCSSEGL
PAPEIFWSKKLDNGNLQHLSGNATLTLIAMRMEDSGIYVCEGVNLI GKNRKEVELIVQEKPFV
EISPGPRIAAQIGDSVMLTCSVMGCESPFSWRTQIDSPLSGKVRSEGTNSTLTLSPVSFENEH
SYLCTVTCGHKKLEKGIQVELYSFPRDPEIEMSGGLVNGSSVTVSCKVPSVYPLDRLEIELLKG
ETILENIEFLEDTDMKSLENKSLEMTFIPTI EDTGKALVCQAKLHIDDMEFEPKQRQSTQTLYV



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NVAPRDTTVLVSPSSILEEGSSVNMTCLSQGFPAPKILWSRQLPNGELQPLSENATLTTLISTKM
EDSGVYLCEGINQAGRSRKEVELIIQVTPKDIKLTAFPSESVKEGDTVIIISCTCGNVPETWII L
KKKAETGDTV LKSIDGAYTIRKAQLKDAGVYECE SKNKVGSQ LRS LTL DVQGRENNKDYFSPE