



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 CD69 Protein
Catalog Number: hRP-1987
Manufacturer: LD Biopharma, Inc.

Introduction

Human CD69 gene encodes a member of the calcium dependent lectin superfamily of type II transmembrane receptors. Expression of CD69 protein is induced upon activation of T lymphocytes, and may play a role in proliferation. Furthermore, the protein may act to transmit signals in natural killer cells and platelets. Recent data indicated that myosin light chain 9 & 12 are functional ligands for CD69 that regulate airway inflammation, blocking CD69/myosin light chain 9 & 6 interaction may provide a new strategy for the treatment of asthma.

Full-length extracellular domain of human CD69 cDNA (62 – 199 aa) was constructed with codon optimization gene synthesis and expressed with a human Alpha Fetal protein N-terminal-His-TEV cleavage site Tag (217aa) fusion at FAP 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: CD69 (CLEC2C)
Accession Number: NP_001772
Species: Human
Size: 25 µg / Vial
Composition: 0.25 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

Koji Hayashizaki., et al. *Myosin light chains 9 & 12 are functional ligands for CD69 that regulate airway inflammation.* Sci Immunol. 1, eaaf9154. 16 September (2016).



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Lin CR., et al. *Glycosylation-dependent interaction between CD69 and S100A8/S100A9 complex is required for regulatory T-cell differentiation.* FASEB J. 29 (12), 5006-5017 (2015)

de la Fuente H, et al., *The leukocyte activation receptor CD69 controls T cell differentiation through its interaction with galectin-1.* Mol. Cell. Biol. 34 (13), 2479-2487 (2014)

Ghafourian M, et al., *Increase of CD69, CD161 and CD94 on NK cells in women with recurrent spontaneous abortion and in vitro fertilization failure.* Iran J Immunol 11 (2), 84-96 (2014)

Applications

1. May be used for in vitro CD69 mediated T cell activation regulation study with this protein either as soluble factor or as coating matrix protein.
2. May be used for protein-protein interaction assay.
3. Potential anti- inflammatory response target protein for treatment of various auto-immuno-diseases, such as asthma using CD69 blocking antibodies.
4. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MTLHRNEYGIASILDSYQCTAEISLADLATIFFAQFVQEATYKEVSKMVKDALTAIEKPTGDEQ
SSGCLLENQLPAFLLEELCHEKEILEKYGHSDCCSQSEEGRHNCFLAHKKPTPASIPLFQVPEPVT
SCEAYEEDRETFMNFKIYEIARRHPFLYAPTILLWAARYDKIIPSCCKAENAVECFQTKAATVT
KELRESSGGSHHHHHHGS~~ENLYFQ~~SVGQYNC~~PGQYTF~~SMPSDSHVSSCEDWVG~~YQRKCYF~~IST
VKRSWTS~~Q~~NACSEHGATLAVIDSEKDMN~~FLKRY~~AGREEHWVGLKKEPGHPW~~KWS~~NGKEFNNWF
NVTGSDKCVFLKNTEVSSMECEKNLYWICNKPYK