



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human Mesothelin Protein
Catalog Number: hRP-1881
Manufacturer: LD Biopharma, Inc.

Introduction

Human mesothelin gene encodes a preproprotein that is proteolytically processed to generate two protein products, megakaryocyte potentiating factor and mesothelin. Megakaryocyte potentiating factor functions as a cytokine that can stimulate colony formation of bone marrow megakaryocytes. Mesothelin is a glycosylphosphatidylinositol-anchored cell-surface protein that may function as a cell adhesion protein. This protein is over-expressed in epithelial mesotheliomas, ovarian cancers and in specific squamous cell carcinomas.

Mature Form of human Mesothelin cDNA (296 – 606 aa) was constructed using codon optimization gene synthesis technology with a small T7-His-TEV cleavage site Tag (29aa) 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:	Mesothelin (MPF; SMRP)
Accession Number:	NP_005814
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, 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

Bayoglu IV, et al., Prognostic value of mesothelin expression in patients with triple negative and HER2-positive breast cancers. *Biomed. Pharmacother.* 70, 190-195 (2015)



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Tozbikian G, et al., *Mesothelin expression in triple negative breast carcinomas correlates significantly with basal-like phenotype, distant metastases and decreased survival.* PLoS ONE 9 (12), E114900 (2014)

Pastan I et al., *Discovery of mesothelin and exploiting it as a target for immunotherapy.* Cancer Res. 74 (11), 2907-2912 (2014)

Scholler N, et al., *Soluble member(s) of the mesothelin/megakaryocyte potentiating factor family are detectable in sera from patients with ovarian carcinoma.* Proc. Natl. Acad. Sci. U.S.A. 96 (20), 11531-11536 (1999)

Applications

1. May be used for in vitro mesothelin mediated ligand-specific signal transduction and internalization of receptor-ligand complexes regulation in angiogenesis, inflammatory response, fatty acid metabolism, taste and dietary fat processing for various cells with this protein either as soluble factor or as coating matrix protein.
2. May be used for protein-protein interaction mapping.
3. Potential therapeutic/biomarker protein for specific antibody mediated treatment or monitoring prognosis for various cancers, such as ovarian cancer, et al.
4. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHENLYFQGGEFEVEKTACPSGKKAREIDESLIFYKKWELEACVDAA
LLATQMDRVNAIPFTYEQLDVLKHKLDELYPQGYPESEVIQHLGYLFLKMSPEDIRKWNVTSLET
LKALLEVNKGHEMSPQAPRRPLPQVATLIDRFVKGRGQLDKDTLDTLTAFYPGYLCSLSPEELS
SVPPSSIWAVRPQDLDTCDPRQLDVLYPKARLAFQNMNGSEYFVKIQSFLGGAPTEDLKALSQQ
NVSMDLATFMKLRTDAVLPLTVAEVQKLLGPHVEGLKAEERHRPVRDWILRQRQDDLDLTLGLGL
QGGIPNGYLVLDSLMEALS