LD Biopharma, Inc.
7384 Trade Street, Suite B
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human **Meflin** Protein
Catalog Number: HRP-2936
Manufacturer: LD Biopharma, Inc. USA

Introduction

Human Meflin is a glycosylphosphatidyl inositol (GPI)-anchored protein encoded by the immunoglobulin superfamily containing leucine-rich repeat (*ISLR*/*Islr*) gene. Recently, it was reported that Mefilin is a specific marker of mesenchymal stromal/stem cells (MSCs) that are found in the perivascular space of multiple organs, including the bone marrow (BM). Meflin expression is limited to un-differentiated MSCs and is not detected in their differentiated lineages, such as mature osteoblasts, chondrocytes, and adipocytes. Positive cancer-associated fibroblasts was demonstrated to inhibit pancreatic carcinogenesis in xenograft tumor model.

Full-length mature form of human Meflin cDNA (19 – 428aa) 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 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:	Meflin (ISLR; HsT17563)
Accession Number:	NP_005536.1
Species:	Human
Size:	50µg / 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, DTT and others.
Storage:	In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least two weeks.

Key References

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Yasuyuki Mizutani, et al., ***Meflin-positive cancer-associated fibroblasts inhibit pancreatic carcinogenesis***. Cancer Res. doi: 10.1158/0008-5472.CAN-19-0454. (2019)

Maeda K, et al., ***Identification of Meflin as a Potential Marker for Mesenchymal Stromal Cells***. Sci Rep 6, 22288 (2016)

Nagasawa A, et al., ***Human and mouse ISLR (immunoglobulin superfamily containing leucine-rich repeat) genes: genomic structure and tissue expression***. Genomics 61 (1), 37-43 (1999)

Applications

1. May be used for in vitro Meflin mediated spermatogenesis, embryo implantation, neural network formation, and tumor progression regulation study in vitro for various cells with this recombinant Meflin protein either as soluble factor or as coating matrix protein.

2. May be used for Meflin protein-protein interaction assay.

3. Potential Therapeutic / diagnostic protein, which may be used as cancer therapeutic target, such as pancreatic cancer.

4. As native human Meflin immunogen for its specific antibody production.

Quality Control

Purity: > 92 % by SDS-PAGE.

Recombinant Human AFPn- Meflin Fusion Protein Sequence. (68.4 kD)

MTLHRNEYGIASILDSYQCTAEISLADLATIFFAQFVQEATYKEVSKMVKDALTAIEKPTGDEQ
SSGCLENQLPAFLEELCHEKEILEKYGHSDCCSQSEEGRHNCFLAHKKPTPASIPLFQVPEPVT
SCEAYEEDRETFMNKFIYEIARRHPFLYAPTILLWAARYDKIIPSCCKAENAVECFQTKAATVT
KELRESSGGSHHHHHHGSENLYFQGCPEPCDCGEKYGFQIADCAYRDLESVPPGFPANVTTLSL
SANRLPGLPEGAFREVPLLQSLWLAHNEIRTVAAGALASLSHLKSLDLSHNLISDFAWSDLHNL
SALQLLKMDSNELTFIPRDAFRSLRALRSLQLNHNRLHTLAEGTFTPLTALSHLQINENPFDCT
CGIVWLKTWALTTAVSIPEQDNIACTSPHVLKGTPLSRLPPLPCSAPSVQLSYQPSQDGAELRP
GFVLALHCDVDGQPAPQLHWHIQIPSGIVEITSPNVGTDGRALPGTPVASSQPRFQAFANGSLL
IPDFGKLEEGTYSCLATNELGSAESSVDVALATPGEGGEDTLGRRFHGKAVEGKGCYTVDNEVQ
PSGPEDNVVIIYLSRAGNPEAAVAEGVPGQLPPGLLLLGQSLLLFFFLTSF