



LD Biopharma, Inc.
9924 Mesa Rim Road, Suite B
San Diego, CA 92121
Tel: 858-876-8266
<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human MATN3 Protein
Catalog Number: hRP-1707
Manufacturer: LD Biopharma, Inc.

Introduction

Human Matrillin-3 (MATN3) gene encodes a member of von Willebrand factor A domain containing protein family. This family of proteins is thought to be involved in the formation of filamentous networks in the extracellular matrices of various tissues. MATN3 protein contains two von Willebrand factor A domains; it is present in the cartilage extracellular matrix and has a role in the development and homeostasis of cartilage and bone. Mutations in this gene result in multiple epiphyseal dysplasia.

Full-length human Matrillin-3 cDNA (29 - 486aa, derived from BC139907) was constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) 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: MATN3 (DIPOA; EDM5; HOA; OADIP; OS2)
Accession Number: NP_002372
Species: Human
Size: 40 µg / Vial
Composition: 0.40 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

Klatt AR, *The matrilin-3 VWA1 domain modulates interleukin-6 release from primary human chondrocytes*. Osteoarthr. Cartil. 21 (6), 869-873 (2013)



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Kim OH, et al., *Revisit of multiple epiphyseal dysplasia: ethnic difference in genotypes and comparison of radiographic features linked to the COMP and MATN3 genes.* Am. J. Med. Genet. A 155A (11), 2669-2680 (2011)

Wagener R, et al., *Primary structure of matrilin-3, a new member of a family of extracellular matrix proteins related to cartilage matrix protein (matrilin-1) and von Willebrand factor.* FEBS Lett. 413 (1), 129-134 (1997)

Applications

1. May be used for in vitro MATN3 mediated osteoblast differentiation pathway regulation study for cartilage formation with this protein either as soluble factor or as coating matrix protein.
2. May be used for protein-protein interaction mapping.
3. Potential biomarker protein for clinical monitoring NK cell function in vitro.
4. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHHENLYFQGGFEGSDPVARPGFRRLETRGPGGSPGRRPSPAAPDGAP
ASGTSEPGRARGAGVCKSRPLDLVFIIDSSRSVRPLEFTKVKT'FVSRIIDTLDIGPADTRVAVV
NYASTVKIEFQLQAYTDKQSLKQAVGRITPLSTGTMSGLAIQTAMDEAFTVEAGAREPSSNIPK
VAIIIVTDGRPQDQVNEVAARAQASGIELYAVGVDRADMASLKMMASEPLEEHV'FYVETYGVIEK
LSSRFQETFCALDPCVLGTHQCQHVCISDGEKGHHCECSQGYTLNADKKTCSALDRCALNTHGC
EHICVNDRSGSYHCECYEGYTLNEDRKTCQAQDKCALGTHGCQHICVNDRTGSHHCECYEGYTL
NADKKTCSVRDKCALGSHGCQHICVSDGAASYHCDCYPGYTLNEDKKTCSATEEARRLVSTEDA
CGCEATLAFQDKVSSYLQRLNNTKLDLILEKIKINEYEQIHR