



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human Decorin Protein
Catalog Number: hRP-0501
Manufacturer: LD Biopharma, Inc.

Introduction

The protein encoded by human decorin (DCN) gene is a small cellular or pericellular matrix proteoglycan that is closely related in structure to biglycan protein. The encoded protein and biglycan are thought to be the result of gene duplication. This protein is a component of connective tissue, binds to type I collagen fibrils, and plays a role in matrix assembly. It contains one attached glycosaminoglycan chain. This protein is capable of suppressing the growth of various tumor cell lines. This gene is a candidate gene for the Marfan syndrome.

Recombinant human decorin extracellular domain cDNA (31-359 aa.) was constructed with codon optimization and expressed 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, refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified. Coating this recombinant protein at 5-10 ug / well (6 well plate) in a specific culture medium may be used for studying human cells activation / differentiation in vitro.

Gene Symbol: DCN (CCD; DSPG2; PG40; GII; SLRR1B)
Accession Number: NP_001911.1
Species: Human
Size: 100 µg / Vial
Composition: 0.5 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 -20°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References



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Krumdieck, R., et al., *The proteoglycan decorin binds C1q and inhibits the activity of the C1 complex.* J. Immunol. 149 (11), 3695-3701 (1992)

Biaoxue, R., et al., *Decreased expression of decorin and p57(KIP2) correlates with poor survival and lymphatic metastasis in lung cancer patients.* Int. J. Biol. Markers 26 (1), 9-21 (2011)

Iozzo, R.V., et al., *Decorin antagonizes IGF receptor I (IGF-IR) function by interfering with IGF-IR activity and attenuating downstream signaling.* J. Biol. Chem. 286 (40), 34712-34721 (2011)

Applications

1. May be used as coating matrix protein for human cell functional and differentiation regulation study in vitro,
2. May be used as potential biomarker for lung cancer diagnostic development.
3. May be used 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

MASMTGGQQMGRGHHHHHGNLYFQG[^]GEFEASGIGPEVPDDRDFEPSLGPVCPFRCQCHLRVV
QCSDLGLDKVPKDLPPDTLLDLQNNKITEIKDGDGFKNLKNLHALILVNNKISKVSPGAFTPLV
KLERLYLSKNQLKELPEKMPKTLQELRAHENEITKVRKVTFNGLNQMIVIELGTNPLKSSGIEN
GAFQGMKKLSYIRIADTNITSIPQGLPPSLTELHLDGNIKISRVDAAASLKGLNNLAKLGLSFNSI
SAVDNGSLANTPHLRELHLDNNKLTRVPGGLAEHKYIQVVYLHNNNISVVGSSDFCPPGHNTKK
ASYSGVSLFSNPVQYWEIQPSTFRCVYVRSALIQLGNYK