SANTA CRUZ BIOTECHNOLOGY, INC.

Decorin (9XX): sc-73896

BACKGROUND

Decorin is a small leucine-rich proteoglycan (SLRP) family member that consists of a glycosaminoglycan chain-containing core protein. The core protein contains ten leucine rich repeats that contain sites for glycosylation, flanked by disulfide bond stabilizing loops. Decorin binds to Collagen Type I, II and IV *in vivo* and promotes the formation of fibers with variations in stability and solubility. The Decorin core protein binds to growth factors, intercellular matrix molecules, such as Fibronectin and Thrombospondin, and to the Decorin endocytosis receptor. Decorin binds to and inhibits TGFβ and is a direct or indirect negative modulator of TGFβ synthesis. Inhibition of Decorin core protein gene expression by the combination of IFN-γ and TNFα may contribute to cartilage destruction that is characteristic of inflammatory joint diseases. The human Decorin gene maps to chromosome 12q21.33 and encodes a 359 amino acid protein.

REFERENCES

1. Krusius, T. and Ruoslahti, E. 1986. Primary structure of an extracellular matrix proteoglycan core protein deduced from cloned cDNA. Proc. Natl. Acad. Sci. USA 83: 7683-7687.
2. Dyne, K.M., et al. 1996. Deficient expression of the small proteoglycan Decorin in a case of severe/lethal osteogenesis imperfecta. Am. J. Med. Genet. 63: 161-166.

CHROMOSOMAL LOCATION

Genetic locus: DCN (human) mapping to 12q21.33.

SOURCE

Decorin (9XX) is a mouse monoclonal antibody raised against amino acids 17-172 of Decorin of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and protein stabilizer.

APPLICATIONS

Decorin (9XX) is recommended for detection of Decorin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Decorin siRNA (h): sc-40993, Decorin shRNA Plasmid (h): sc-40993-SH and Decorin shRNA (h) Lentiviral Particles: sc-40993-V.

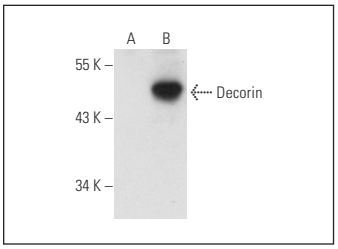
Molecular Weight of Decorin: 43 kDa.

Positive Controls: Decorin (h2): 293T Lysate: sc-170640.

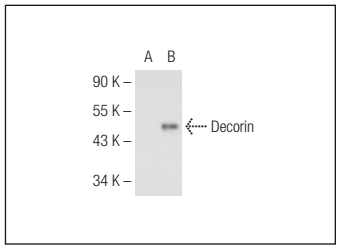
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Decorin (9XX): sc-73896. Western blot analysis of Decorin expression in non-transfected: sc-117752 (**A**) and human Decorin transfected: sc-170640 (**B**) 293T whole cell lysates.



Decorin (9XX): sc-73896. Western blot analysis of Decorin expression in non-transfected: sc-110760 (**A**) and human Decorin transfected: sc-159946 (**B**) 293 whole cell lysates.

SELECT PRODUCT CITATIONS

1. Lacerda, C.M., et al. 2009. Differential protein expression between normal, early-stage, and late-stage myxomatous mitral valves from dogs. Proteomics Clin. Appl. 3: 1422-1429.
2. Mohan, R.R., et al. 2011. Targeted Decorin gene therapy delivered with adeno-associated virus effectively retards corneal neovascularization *in vivo*. PLoS ONE 6: e26432.
3. Decaris, M.L., et al. 2012. Transferable cell-secreted extracellular matrices enhance osteogenic differentiation. Acta Biomater. 8: 744-752.
4. Farace, C., et al. 2015. Microenvironmental modulation of Decorin and lumican in temozolomide-resistant glioblastoma and neuroblastoma cancer stem-like cells. PLoS ONE 10: e0134111.
5. Chajra, H., et al. 2016. Reactivating the extracellular matrix synthesis of sulfated glycosaminoglycans and proteoglycans to improve the human skin aspect and its mechanical properties. Clin. Cosmet. Investig. Dermatol. 9: 461-472.
6. Sawada, Y., et al. 2018. Clinical utility of Decorin in follicular fluid as a biomarker of oocyte potential. Reprod. Biol. 18: 33-39.
7. Chen, Y., et al. 2019. PLGA-collagen-ECM hybrid scaffolds functionalized with biomimetic extracellular matrices secreted by mesenchymal stem cells during stepwise osteogenesis-co-adipogenesis. J. Mater. Chem. B 7: 7195-7206.
8. Daum, R., et al. 2020. Fibronectin adsorption on electrospun synthetic vascular grafts attracts endothelial progenitor cells and promotes endothelialization in dynamic *in vitro* culture. Cells 9: 778.
9. Pietikäinen, A., et al. 2021. Conserved lysine residues in decorin binding proteins of *Borrelia garinii* are critical in adhesion to human brain microvascular endothelial cells. Mol. Microbiol. E-published.

RESEARCH USE

For research use only, not for use in diagnostic procedures.