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antibody and ELISA experts

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# Anti-Decorin/DCN Antibody Picoband®

**Catalog Number:** PB9174

## About DCN

Decorin is a protein that in humans is encoded by the DCN gene. This gene is mapped to 12q21.3. It belongs to the small leucine-rich proteoglycan (SLRP) family and consists of a protein core containing leucine repeats with a glycosaminoglycan (GAG) chain consisting of either chondroitin sulfate (CS) or dermatan sulfate (DS). Decorin is a small cellular or pericellular matrix proteoglycan and is closely related in structure to biglycan protein. This protein is a component of connective tissue, binds to type I collagen fibrils, and plays a role in matrix assembly. And it also may play a role in epithelial/mesenchymal interactions during organ development and shaping. Decorin has been shown to have anti-tumorigenic properties in an experimental murine tumor model and is capable of suppressing the growth of various tumor cell lines.

## Overview

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| Product Name | Anti-Decorin/DCN Antibody Picoband® |
| Reactive Species | Human, Mouse, Rat |
| Description | Boster Bio Anti-Decorin/DCN Antibody Picoband® catalog # PB9174. Tested in IHC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance. |
| Application | IHC, WB |
| Clonality | Polyclonal |
| Formulation | Each vial contains antibody formulated with stabilizing components, 0.9mg NaCl, 0.2mg Na2HPO4, 0.01mg NaN3.<br>*This antibody is supplied in a stabilized formulation.<br>Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required. |
| Storage Instructions | Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles. |
| Host | Rabbit |
| Uniprot ID | P07585 |

## Technical Details

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| Immunogen | E.coli-derived human Decorin recombinant protein (Position: D31-K359). Human Decorin shares 80% and 77% amino acid (aa) sequences identity with mouse and rat Decorin, respectively. |
| Recommended Detection Systems | Boster recommends ECL Plus Western Blotting Substrate (Catalog # AR1196-200) for Western |

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| | blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P). |
| Cross Reactivity | No cross-reactivity with other proteins |
| Isotype | Rabbit IgG |
| Form | Lyophilized |
| Concentration | Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml. |
| Purification | Immunogen affinity purified. |
| Suggested Dilutions | Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat<br>Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human |

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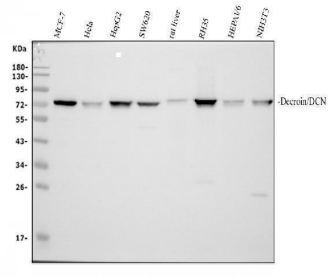
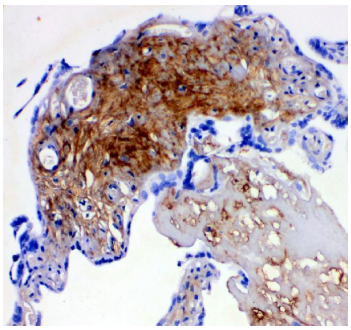
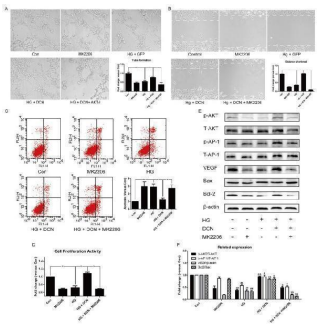
# Anti-Decorin/DCN Antibody Picoband® (PB9174) Images




Western blot analysis of Decorin using anti-Decorin antibody (PB9174). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human MCF-7 whole cell lysates, Lane 2: human Hela whole cell lysates, Lane 3: human HepG2 whole cell lysates, Lane 4: human SW620 whole cell lysates, Lane 5: rat liver tissue lysates, Lane 6: rat RH35 whole cell lysates, Lane 7: mouse HEPA1-6 whole cell lysates, Lane 8: mouse NIH/3T3 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Decorin antigen affinity purified polyclonal antibody (PB9174) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for Decorin at approximately 70 kDa. The expected band size for Decorin is at 40 kDa.

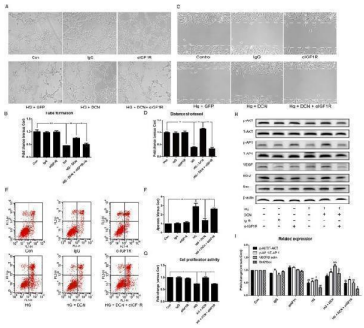


IHC analysis of Decorin using anti-Decorin antibody (PB9174). Decorin was detected in a paraffin-embedded section of human placenta tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Decorin Antibody (PB9174) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

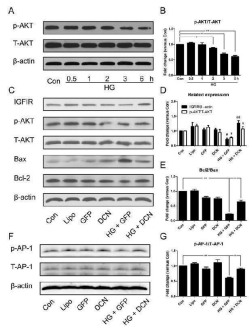


The AKT inhibitor MK2206 abolished the effects induced by overexpression of decorin. ( A ) The tube formation test; the photographs were taken at a magnification of 100×. ( B ) The cell wound healing test; the photographs were taken at a magnification of 100×. ( C ) The apoptosis assay. ( D ) CCK8 assessment. ( E , F ) The expression of VEGF, Bcl2, and Bax and the phosphorylation of AKT and AP 1. All data are presented as the mean ± SEM. *p<0.05; **p<0.01. # p<0.05, ## p<0.01, compared to Con. & p<0.05, && p<0.01, compared to HG + GFP (HG). $ p<0.05, $$ p<0.01, compared to HG + DCN. Index in PubMed under a CC BY license. PMID: 28290552

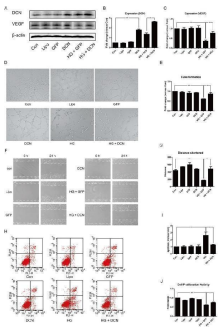
The IGF1R antibody (alphaIGF1R) blocked the effects induced by overexpression of decorin. ( A , B ) The tube



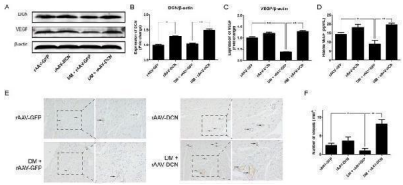
formation test; the photographs were taken at a magnification of 100×. ( C , D ) The cell wound healing test; the photographs were taken at a magnification of 100×. ( E , F ) The apoptosis assay. ( G ) CCK8 assessment. ( H , I ) The expression of VEGF, Bcl2, and Bax and the phosphorylation of AKT and AP 1. All data are presented as the mean ± SEM. *p<0.05; **p<0.01. # p<0.05, ## p<0.01, compared to Con. & p<0.05, && p<0.01, compared to HG + GFP. $ p<0.05, $$ p<0.01, compared to HG + DCN. Index in PubMed under a CC BY license. PMID: 28290552



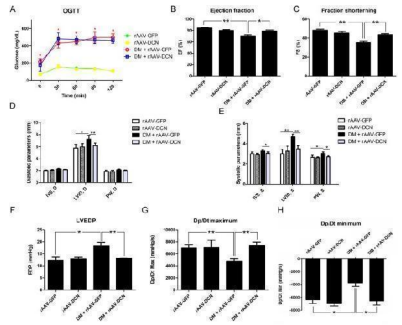
Overexpression of decorin activated the IGF1R-AKT-AP-1 pathway. ( A , B ) The phosphorylation of AKT was decreased by HG treatment in a time-dependent manner. ( C – E ) The expression of IGF1R, Bcl2, and Bax and the phosphorylation of AKT. ( F , G ) The phosphorylation of AP-1. All data are presented as the mean ± SEM. *p<0.05; **p<0.01. # p<0.05, compared to Con. & p<0.05, && p<0.01, compared to HG + GFP. Index in PubMed under a CC BY license. PMID: 28290552



Overexpression of decorin ameliorated the angiogenesis impaired by high glucose (HG). ( A – C ) The expression of decorin and VEGF. ( D , E ) The tube formation test; the photographs were taken at a magnification of 100×. ( F , G ) The cell wound healing test; the photographs were taken in a magnification of 100×. ( H , I ) The apoptosis rate analyzed by an Annexin V–FITC kit through flow cytometry. ( J ) The proliferative ability assessed with a CCK8 assay. All data are presented as the mean ± SEM. *p<0.05; **p<0.01. Index in PubMed under a CC BY license. PMID: 28290552



Overexpression of decorin increased angiogenesis in the diabetic hearts. ( A – C ) The expression of decorin and VEGF. ( D ) The VEGF concentration in the plasma. ( E ) The capillary density using immunochemistry with a CD31 antibody. The photographs were taken at a magnification of 100× and zoomed at a magnification of 200×. The arrows show the capillary stained with the CD31 antibody. ( F ) The number of vessels counted from the immunochemistry staining. All data are presented as the mean ± SEM. *p<0.05; **p<0.01. Index in PubMed under a CC BY license. PMID: 28290552



Overexpression of decorin improved cardiac function in diabetic cardiomyopathy. ( A ) The oral glucose tolerance test (OGTT). ( B ) The left ventricular ejection fraction (EF) evaluated by echocardiography. ( C ) The fraction shortening (FS) evaluated by echocardiography. ( D , E ) The left ventricular wall thickness (including the interventricular septum (IVS) and the posterior wall (PW)) and the internal dimension of the left ventricle (LVID). ( F – H ) The hemodynamic function was evaluated by the cardiac catheter system, including the left ventricular end-diastolic

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pressure (LVEDP), as well as the Dp/dt maximum and minimum. All data are presented as the mean ± SEM. *p<0.05; **p<0.01. Index in PubMed under a CC BY license.
PMID: 28290552

## 3 Publications Citing This Product

1. PubMed ID: 27713567, An Animal Model of Modic Changes by Embedding Autogenous Nucleus Pulposus inside Subchondral Bone of Lumbar Vertebrae

2. PubMed ID: 24987434, Huang Gf, Zou J, Shi J, Zhang Dy, Pen Hf, Zhang Q, Gao Y, Wang By. Evid Based Complement Alternat Med. 2014;2014:731395. Doi: 10.1155/2014/731395. Epub 2014 May 27. The Effect Of Electroacupuncture On The Extracellular Matrix Synthesis And Degrada...

3. PubMed ID: 28290552, Lai J, Chen F, Chen J, Ruan G, He M, Chen C, Tang J, Wang DW. Sci Rep. 2017 Mar 14;7:44473. doi: 10.1038/srep44473. Overexpression of decorin promoted angiogenesis in diabetic cardiomyopathy via IGF1R-AKT-VEGF signaling

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