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# Anti-NOV/CCN3 Picoband Antibody

Catalog # ABO13050

## Product Information

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| **Application** | WB, IHC-P |
| **Primary Accession** | P48745 |
| **Host** | Rabbit |
| **Reactivity** | Rat |
| **Clonality** | Polyclonal |
| **Format** | Lyophilized |
| **Description** | Rabbit IgG polyclonal antibody for Protein NOV homolog(NOV) detection. Tested with WB, IHC-P in Human;Rat. |
| **Reconstitution** | Add 0.2ml of distilled water will yield a concentration of 500ug/ml. |

## Additional Information

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| **Gene ID** | 4856 |
| **Other Names** | Protein NOV homolog, NovH, CCN family member 3, Insulin-like growth factor-binding protein 9, IBP-9, IGF-binding protein 9, IGFBP-9, Nephroblastoma-overexpressed gene protein homolog, NOV, CCN3, IGFBP9, NOVH |
| **Calculated MW** | 39162 |
| **Application Details** | Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, Rat, By Heat<br>Western blot, 0.1-0.5 □g/ml, Human, |
| **Subcellular Localization** | Secreted. |
| **Tissue Specificity** | Expressed in bone marrow, thymic cells and nephroblastoma. Increased expression in Wilms tumor of the stromal type. . |
| **Source** | Eukaryota |
| **Contents** | Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3. |
| **Immunogen** | A synthetic peptide corresponding to a sequence at the C-terminus of human NOV/CCN3 (334-357aa HTNCPKNNEAFLQELELKTTRGKM), different from the related mouse sequence by seven amino acids, and from the related rat sequence by four amino acids. |
| **Purification** | Immunogen affinity purified. |

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| **Cross Reactivity** | No cross reactivity with other proteins. |
| **Storage** | At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time. Avoid repeated freezing and thawing. |

## Protein Information

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| **Name** | CCN3 ( HGNC:7885) |
| **Synonyms** | IGFBP9, NOV, NOVH |
| **Function** | Immediate-early protein playing a role in various cellular processes including proliferation, adhesion, migration, differentiation and survival (PubMed:12050162, PubMed:12695522, PubMed:15181016, PubMed:15611078, PubMed:21344378). Acts by binding to integrins or membrane receptors such as NOTCH1 (PubMed:12695522, PubMed:15611078, PubMed:21344378). Essential regulator of hematopoietic stem and progenitor cell function (PubMed:17463287). Inhibits myogenic differentiation through the activation of Notch-signaling pathway (PubMed:12050162). Inhibits vascular smooth muscle cells proliferation by increasing expression of cell-cycle regulators such as CDKN2B or CDKN1A independently of TGFB1 signaling (PubMed:20139355). Ligand of integrins ITGAV:ITGB3 and ITGA5:ITGB1, acts directly upon endothelial cells to stimulate pro-angiogenic activities and induces angiogenesis. In endothelial cells, supports cell adhesion, induces directed cell migration (chemotaxis) and promotes cell survival (PubMed:12695522). Also plays a role in cutaneous wound healing acting as integrin receptor ligand. Supports skin fibroblast adhesion through ITGA5:ITGB1 and ITGA6:ITGB1 and induces fibroblast chemotaxis through ITGAV:ITGB5. Seems to enhance bFGF-induced DNA synthesis in fibroblasts (PubMed:15611078). Involved in bone regeneration as a negative regulator (By similarity). Enhances the articular chondrocytic phenotype, whereas it repressed the one representing endochondral ossification (PubMed:21871891). Impairs pancreatic beta-cell function, inhibits beta-cell proliferation and insulin secretion (By similarity). Plays a role as negative regulator of endothelial pro-inflammatory activation reducing monocyte adhesion, its anti-inflammatory effects occur secondary to the inhibition of NF-kappaB signaling pathway (PubMed:21063504). Contributes to the control and coordination of inflammatory processes in atherosclerosis (By similarity). Attenuates inflammatory pain through regulation of IL1B- and TNF-induced MMP9, MMP2 and CCL2 expression. Inhibits MMP9 expression through ITGB1 engagement (PubMed:21871891). Brain osteoanabolic hormone (By similarity). Drives osteogenesis in osteochondral skeletal stem cells (PubMed:38987585). During lactation, maintains the maternal skeleton and viability of offspring (By similarity). |
| **Cellular Location** | Secreted {ECO:0000250\|UniProtKB:Q64299}. Cytoplasm. Cell junction, gap junction. Note=Localizes at the gap junction in presence of GJA1. {ECO:0000250\|UniProtKB:Q9QZQ5} |
| **Tissue Location** | Expressed in endothelial cells (at protein level) (PubMed:21063504). Expressed in bone marrow and thymic cells |

## Background

NOV (nephroblastoma overexpressed), also known as CCN3, is a matricellular protein that in humans is encoded by the NOV gene. The protein encoded by this gene is a small secreted cysteine-rich protein and a member of the CCN family of regulatory proteins. CNN family proteins associate with the extracellular

matrix and play an important role in cardiovascular and skeletal development, fibrosis and cancer development.

## Images

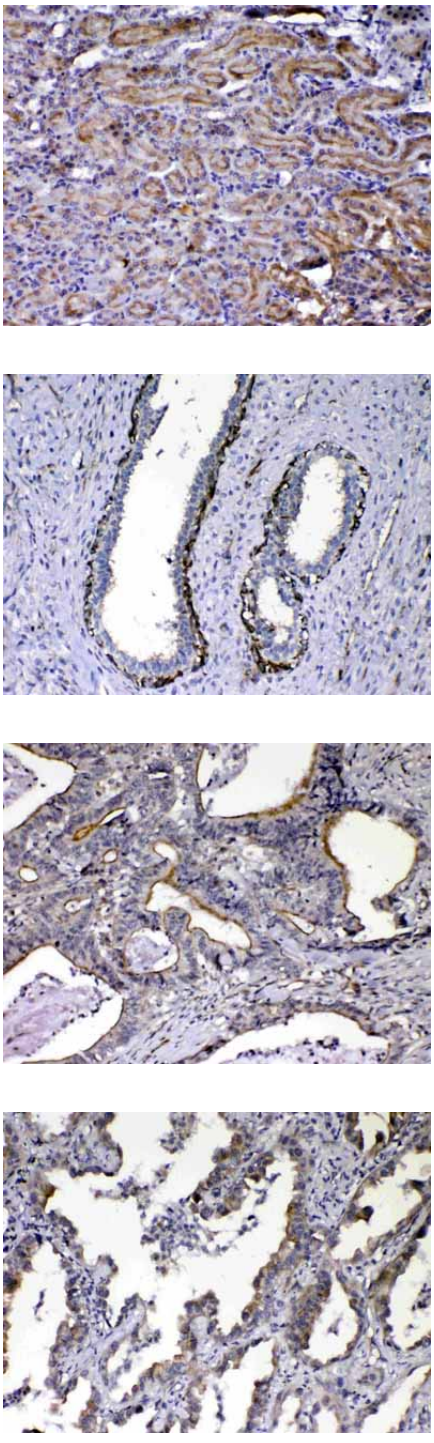
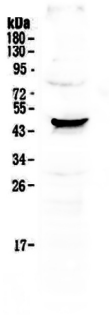


Figure 5. IHC analysis of NOV/CCN3 using anti-NOV/CCN3 antibody (ABO13050).




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