

NOV/CCN3 Protein, Mouse (HEK293, His)

Cat. No.:	HY-P71149
Synonyms:	Protein NOV homolog; NovH; CCN family member 3; Nephroblastoma-overexpressed gene protein homolog; Nov
Species:	Mouse
Source:	HEK293
Accession:	Q64299 (S26-I354)
Gene ID:	18133
Molecular Weight:	Approximately 50.0 kDa

PROPERTIES

AA Sequence	<pre> S L R C P S R C P P K C P S I S P T C A P G V R S V L D G C S C C P V C A R Q R G E S C S E M R P C D Q S S G L Y C D R S A D P N N Q T G I C M V P E G D N C V F D G V I Y R N G E K F E P N C Q Y F C T C R D G Q I G C L P R C Q L D V L L P G P D C P A P R K V A V P G E C C E K W T C G S D E Q G T Q G T L G G L A L P A Y R P E A T V G V E V S D S S I N C I E Q T T E W S A C S K S C G M G V S T R V T N R N R Q C E M V K Q T R L C I V R P C E Q E P E E V T D K K G K K C L R T K K S L K A I H L Q F E N C T S L Y T Y K P R F C G V C S D G R C C T P H N T K T I Q V E F Q C L P G E I I K K P V M V I G T C T C Y S N C P Q N N E A F L Q D L E L K T S R G E I </pre>
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	NOV/CCN3 protein, functioning as an immediate-early participant, plays a pivotal role in a diverse array of cellular processes encompassing proliferation, adhesion, migration, differentiation, and survival. Operating through binding interactions with integrins or membrane receptors such as NOTCH1, NOV/CCN3 emerges as an essential regulator of hematopoietic stem and
-------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

progenitor cell function. It inhibits myogenic differentiation by activating the Notch-signaling pathway and curtails vascular smooth muscle cells proliferation independently of TGF β 1 signaling, influencing the expression of cell-cycle regulators like CDKN2B or CDKN1A. As a ligand for integrins ITGAV:ITGB3 and ITGA5:ITGB1, NOV/CCN3 directly stimulates pro-angiogenic activities, induces angiogenesis, and supports endothelial cell adhesion, migration, and survival. Additionally, it plays roles in cutaneous wound healing, skin fibroblast adhesion, and chemotaxis through interactions with various integrin pairs. Moreover, NOV/CCN3 contributes to bone regeneration, negatively regulating the articular chondrocytic phenotype while repressing endochondral ossification. It also affects pancreatic beta-cell function, acting as a negative regulator by inhibiting beta-cell proliferation and insulin secretion. Functioning as a negative regulator of endothelial pro-inflammatory activation, it reduces monocyte adhesion and exerts anti-inflammatory effects by inhibiting the NF-kappaB signaling pathway. NOV/CCN3 further contributes to the control of inflammatory processes in atherosclerosis and attenuates inflammatory pain through the regulation of IL1B- and TNF-induced MMP9, MMP2, and CCL2 expression, inhibiting MMP9 expression through engagement with ITGB1. It engages in diverse protein interactions, including FBLN1, NOTCH1, GJA1/CX43, ITGA5:ITGB1, ITGAV:ITGB3, ITGAV:ITGB5, and ZDHHC22, potentially leading to CCN3 palmitoylation. The breadth of these interactions underscores the intricate and multifaceted role of NOV/CCN3 in cellular processes and regulatory pathways.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA