

nov (F-8): sc-136966

BACKGROUND

The CCN (CTGF/Cyr61/nov) family of genes presently consists of six distinct members, which encode proteins that participate in fundamental biological processes such as cell proliferation, adhesion, migration, differentiation, wound healing, angiogenesis and several pathologies including fibrosis and tumorigenesis. Whereas Cyr61 and CTGF act as positive regulators of cell growth, nov (nephroblastoma overexpressed, CCN3 or novH) provides the first example of a CCN protein with negative regulatory properties and the first example of aberrant expression being associated with tumor development. In animals and humans, increased expression of nov is detected in tissues where calcium is a key regulator, such as the adrenal gland, central nervous system, bone and cartilage, heart muscle and kidney. The nov protein associates with the Notch1 extracellular domain and inhibits myoblast differentiation via the Notch signaling pathway. The gene that expresses nov is located on human chromosome 8q24.12 and was originally cloned following discovery of its avian homolog as a consequence of overexpression in virally induced nephroblastoma.

REFERENCES

1. Perbal, B. 2001. Nov (nephroblastoma overexpressed) and the CCN family of genes: structural and functional issues. *Mol. Pathol.* 54: 57-79.
2. Kocialkowski, S., Yeager, H., Kingdom, J., Perbal, B. and Schofield, P.N. 2001. Expression of the human nov gene in first trimester fetal tissues. *Anat. Embryol.* 203: 417-427.
3. Li, C.L., Martinez, V., He, B., Lombet, A. and Perbal, B. 2002. A role for CCN3 (nov) in calcium signalling. *Mol. Pathol.* 55: 250-261.
4. Sakamoto, K., Yamaguchi, S., Ando, R., Miyawaki, A., Kabasawa, Y., Takagi, M., Li, C.L., Perbal, B. and Katsube, K. 2002. The nephroblastoma overexpressed gene (nov/CCN3) protein associates with Notch1 extracellular domain and inhibits myoblast differentiation via Notch signaling pathway. *J. Biol. Chem.* 277: 29399-29405.
5. Lafont, J., Laurent, M., Thibout, H., Lallemand, F., Le Bouc, Y., Atfi, A. and Martinierie, C. 2002. The expression of novH in adrenocortical cells is down-regulated by TGF β 1 through c-Jun in a Smad-independent manner. *J. Biol. Chem.* 277: 41220-41229.

CHROMOSOMAL LOCATION

Genetic locus: NOV (human) mapping to 8q24.12.

SOURCE

nov (F-8) is a mouse monoclonal antibody raised against amino acids 48-118 (deletion amino acid 104) mapping near the N-terminus of nov of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

nov (F-8) is recommended for detection of nov of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 nov siRNA (h): sc-39333, nov shRNA Plasmid (h): sc-39333-SH and nov shRNA (h) Lentiviral Particles: sc-39333-V.

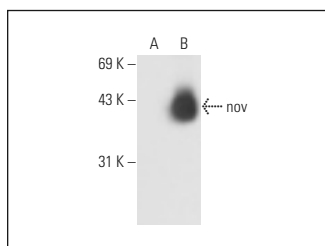
Molecular Weight of glycosylated nov: 44-48 kDa.

Positive Controls: nov (h): 293T Lysate: sc-159751 or HeLa whole cell lysate: sc-2200.

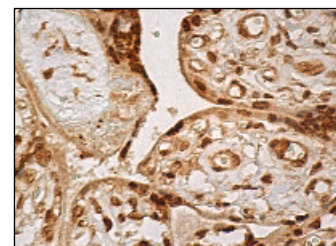
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



nov (F-8): sc-136966. Western blot analysis of nov expression in non-transfected: sc-117752 (A) and human nov transfected: sc-159751 (B) 293T whole cell lysates.



nov (F-8): sc-136966. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic and nuclear staining of trophoblastic and interstitial cells.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.