

# Nidogen (331F3): sc-47773

## BACKGROUND

Basement membranes are the earliest extracellular matrices produced during embryogenesis. They are synthesized and incorporated into the supramolecular architecture of several components, including laminins, Collagen IV, Nidogen and proteoglycans. Nidogen/Entactin, a sulfated glycoprotein, acts as a link between the extracellular matrix molecules Laminin 1 and Collagen Type IV, and thereby participates in the assembly of basement membranes. Nidogen is a highly conserved member of the Nidogen family, which also includes Nidogen-2. Nidogen-2 has a high level of N- and O-glycosylation, and it interacts with Collagens Type I and IV and Perlecan at a comparable level to Nidogen. Nidogen is synthesized and secreted in primary and established mesenchymal peritubular cells and myoepithelial cells, and it affects adhesion of peritubular cells in an autocrine manner. Nidogen is expressed during embryonic and fetal development exclusively in fully developed basement membranes of the ectoderm and is not expressed in the developing endodermal basement membrane or in membranes disrupted during mesoderm formation. Nidogen also cooperates with Laminin 1 to regulate  $\beta$ -casein expression.

## REFERENCES

- Schroen, D.J., et al. 1996. Interaction of mouse thymocytes and a thymocyte-like cell line with the ECM glycoprotein Entactin. *Cell Immunol.* 167: 141-149.
- Kofeldt, E., et al. 1998. Nidogen-2: a new basement membrane protein with diverse binding properties. *J. Mol. Biol.* 282: 99-109.
- Aumailley, M., et al. 2000. Altered synthesis of laminin-1 and absence of basement membrane component deposition in integrin  $\beta$ 1-deficient embryoid bodies. *J. Cell Sci.* 113: 259-268.
- Pujuguet, P., et al. 2000. Nidogen regulates laminin 1-dependent mammary-specific gene expression. *J. Cell Sci.* 113: 849-858.
- Miosge, N., et al. 2000. Ultrastructural co-localization of Nidogen and Nidogen-2 with Laminin 1 in murine kidney basement membranes. *Histochem. Cell Biol.* 113: 15-24.

## CHROMOSOMAL LOCATION

Genetic locus: NID1 (human) mapping to 1q42.3; Nid1 (mouse) mapping to 13 A1.

## SOURCE

Nidogen (331F3) is a mouse monoclonal antibody raised against purified preparation of kidney laminins of bovine origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgM 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

Nidogen (331F3) is recommended for detection of Nidogen of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Nidogen (331F3) is also recommended for detection of Nidogen in additional species, including bovine.

Suitable for use as control antibody for Nidogen siRNA (h): sc-43176, Nidogen siRNA (m): sc-43177, Nidogen shRNA Plasmid (h): sc-43176-SH, Nidogen shRNA Plasmid (m): sc-43177-SH, Nidogen shRNA (h) Lentiviral Particles: sc-43176-V and Nidogen shRNA (m) Lentiviral Particles: sc-43177-V.

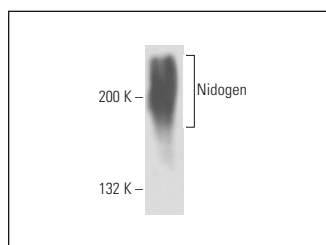
Molecular Weight of Nidogen: 150 kDa.

Positive Controls: mouse heart extract: sc-2254 or mouse placenta extract: sc-364247.

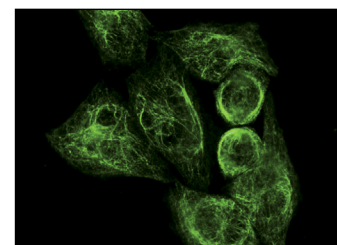
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



Nidogen (331F3): sc-47773. Western blot analysis of human recombinant Nidogen.



Nidogen (331F3): sc-47773. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

## SELECT PRODUCT CITATIONS

- Ma, X., et al. 2009. Difference of gene expression between the central and the peripheral epithelia of the bovine lens. *Chin. Med. J.* 122: 1072-1080.
- Bansal, N., et al. 2011. Tumor suppressor protein p53 recruits human Sin3B/HDAC1 complex for down-regulation of its target promoters in response to genotoxic stress. *PLoS ONE* 6: e26156.

## RESEARCH USE

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