

# Nidogen (H-200): sc-33141

## 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 colocalization 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 (H-200) is a rabbit polyclonal antibody raised against amino acids 201-400 mapping within an internal region of Nidogen of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG 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

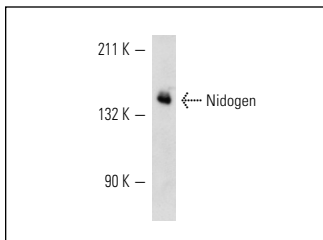
Nidogen (H-200) is recommended for detection of Nidogen of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50,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

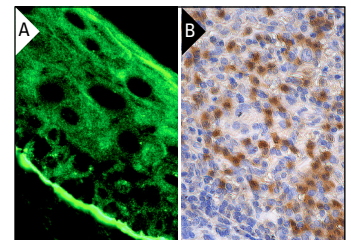
Molecular Weight of Nidogen: 150 kDa.

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

## DATA



Nidogen (H-200): sc-33141. Western blot analysis of human recombinant Nidogen.



Nidogen (H-200): sc-33141. Immunofluorescence staining of normal human cornea frozen section showing basement membrane and anterior corneal epithelium staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of subset of cells in red pulp (B).

## SELECT PRODUCT CITATIONS

- Evseenko, D., et al. 2008. Identification of the critical extracellular matrix proteins that promote human embryonic stem cell assembly. *Stem Cells Dev.* 18: 919-928.
- Kuttner, V., et al. 2013. Global remodelling of cellular microenvironment due to loss of collagen VII. *Mol. Syst. Biol.* 9: 657.

## RESEARCH USE

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


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Try **Nidogen (C-7): sc-133175** or **Nidogen (331F3): sc-47773**, our highly recommended monoclonal alternatives to Nidogen (H-200).