

Nidogen (2Q584): sc-71699

BACKGROUND

Basement membranes are the earliest extracellular matrices produced during embryogenesis. They are synthesized and incorporated into the supra-molecular 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 β -casein expression.

REFERENCES

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- Kofeldt, E., Sasaki, T., Gohring, W. and Timpl, R. 1998. Nidogen-2: a new basement membrane protein with diverse binding properties. *J. Mol. Biol.* 282: 99-109.
- Aumailley, M., Pesch, M., Tunggal, L., Gaill, F. and Fassler, R. 2000. Altered synthesis of Laminin-1 and absence of basement membrane component deposition in Integrin β 1-deficient embryoid bodies. *J. Cell Sci.* 113: 259-268.
- Pujuguet, P., Simian, M., Liaw, J., Timpl, R., Werb, Z. and Bissell, M.J. 2000. Nidogen regulates Laminin-1-dependent mammary-specific gene expression. *J. Cell Sci.* 113: 849-858.
- Miosge, N., Kother, F., Heinemann, S., Kohfeldt, E., Herken, R. and Timpl, R. 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 (2Q584) is a rat monoclonal antibody raised against recombinant fragment corresponding to the G₃ region of Nidogen of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

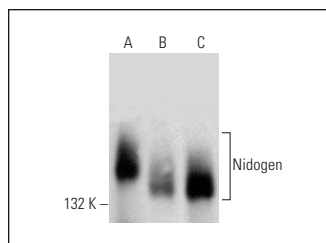
Nidogen (2Q584) is recommended for detection of native and denatured Nidogen of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

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.

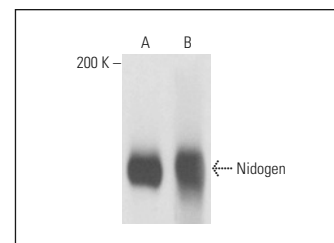
Molecular Weight of Nidogen: 150 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, mouse heart extract: sc-2254 or 3T3-L1 cell lysate: sc-2243.

DATA



Nidogen (2Q584): sc-71699. Western blot analysis of Nidogen expression in mouse heart (A), NIH/3T3 (B) and 3T3-L1 (C) whole cell lysates.



Nidogen (2Q584): sc-71699. Western blot analysis of Nidogen expression in mouse heart (A) and mouse placenta (B) tissue extracts.

STORAGE

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

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.