SANTA CRUZ BIOTECHNOLOGY, INC.

Nidogen (C-7): sc-133175

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

1. Schroen, D.J. and Cheung, H.T. 1996. Interaction of mouse thymocytes and a thymocyte-like cell line with the ECM glycoprotein entactin. Cell. Immunol. 167: 141-149.
2. Kofeldt, E., et al. 1998. Nidogen-2: a new basement membrane protein with diverse binding properties. J. Mol. Biol. 282: 99-109.
3. Aumailley, M., et al. 2000. Altered synthesis of Laminin-1 and absence of basement membrane component deposition in Integrin β1-deficient embryoid bodies. J. Cell Sci. 113: 259-268.

CHROMOSOMAL LOCATION

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

SOURCE

Nidogen (C-7) is a mouse monoclonal antibody raised against amino acids 201-400 mapping within an internal region of Nidogen of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Nidogen (C-7) is available conjugated to agarose (sc-133175 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-133175 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-133175 PE), fluorescein (sc-133175 FITC), Alexa Fluor® 488 (sc-133175 AF488), Alexa Fluor® 546 (sc-133175 AF546), Alexa Fluor® 594 (sc-133175 AF594) or Alexa Fluor® 647 (sc-133175 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-133175 AF680) or Alexa Fluor® 790 (sc-133175 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

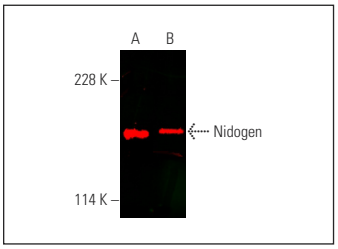
Nidogen (C-7) is recommended for detection of Nidogen of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 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.

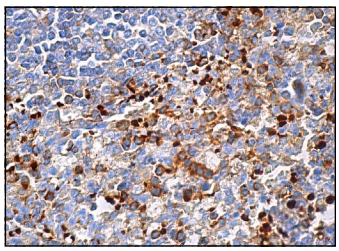
Molecular Weight of Nidogen: 150 kDa.

Positive Controls: rat heart extract: sc-2393, mouse heart extract: sc-2254 or mouse placenta extract: sc-364247.

DATA



Nidogen (C-7): sc-133175. Near-infrared western blot analysis of Nidogen expression in mouse placenta (**A**) and rat heart (**B**) tissue extracts. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.



Nidogen (C-7): sc-133175. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of subset of cells in red pulp.

SELECT PRODUCT CITATIONS

1. Geuens, T., et al. 2021. Thiol-ene cross-linked alginate hydrogel encapsulation modulates the extracellular matrix of kidney organoids by reducing abnormal type 1a1 collagen deposition. Biomaterials 275: 120976.

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.