

# Nidogen (ELM1): sc-33706

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: Nid1 (mouse) mapping to 13 A1.

## SOURCE

Nidogen (ELM1) is a rat monoclonal antibody raised against partially purified preparation of laminin from the EHS mouse tumor.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Nidogen (ELM1) is available conjugated to agarose (sc-33706 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-33706 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-33706 PE), fluorescein (sc-33706 FITC), Alexa Fluor<sup>®</sup> 488 (sc-33706 AF488), Alexa Fluor<sup>®</sup> 546 (sc-33706 AF546), Alexa Fluor<sup>®</sup> 594 (sc-33706 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-33706 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-33706 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-33706 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor<sup>®</sup> is a trademark of Molecular Probes, Inc., Oregon, USA

## APPLICATIONS

Nidogen (ELM1) is recommended for detection of Nidogen of mouse origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500); non cross-reactive with human.

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

Molecular Weight of Nidogen: 150 kDa.

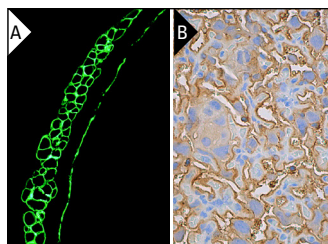
## RESEARCH USE

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

## STORAGE

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

## DATA



Nidogen (ELM1): sc-33706. Immunofluorescence staining of normal mouse eye frozen section showing basement membrane and trabecular meshwork staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse placenta tissue showing membrane and cytoplasmic staining of trophoblastic cells (B).

## SELECT PRODUCT CITATIONS

1. Arends, F., et al. 2015. The biophysical properties of basal lamina gels depend on the biochemical composition of the gel. *PLoS ONE* 10: e0118090.
2. Chang, Y.T., et al. 2016. DNA methyltransferase inhibition restores erythropoietin production in fibrotic murine kidneys. *J. Clin. Invest.* 126: 721-731.
3. Cohen, J., et al. 2019. The Wave complex controls epidermal morphogenesis and proliferation by suppressing Wnt-Sox9 signaling. *J. Cell Biol.* 218: 1390-1406.
4. Ueda, Y., et al. 2020. Intrauterine pressures adjusted by reichert's membrane are crucial for early mouse morphogenesis. *Cell Rep.* 31: 107637.
5. Fiore, V.F., et al. 2020. Mechanics of a multilayer epithelium instruct tumour architecture and function. *Nature* 585: 433-439.
6. Padmanabhan, K., et al. 2020. Thymosin  $\beta$ 4 is essential for adherens junction stability and epidermal planar cell polarity. *Development* 147: dev193425.
7. Sandoval, M., et al. 2021. Interplay of opposing fate choices stalls oncogenic growth in murine skin epithelium. *Elife* 10: e54618.
8. Khamissi, F.Z., et al. 2022. Identification of kidney injury released circulating osteopontin as causal agent of respiratory failure. *Sci. Adv.* 8: eabm5900.
9. Sionov, R.V., et al. 2022. Recognition of tumor nidogen-1 by neutrophil C-type lectin receptors. *Biomedicines* 10: 908.
10. Mahly, A., et al. 2022. Anillin governs mitotic rounding during early epidermal development. *BMC Biol.* 20: 145.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.