

Nidogen-2 (F-2): sc-377424

BACKGROUND

Nidogens are highly conserved proteins present in vertebrate and invertebrate basement membranes. Nidogens connect the Laminin and Collagen IV networks and integrate other proteins into the membrane. In mammals, two Nidogen proteins, Nidogen and Nidogen-2, interact at comparable levels with Collagen I, IV and Perlecan, serving to stabilize basement membranes and playing a major role in embryogenesis. The two isoforms have a similar shape, consisting of three globular domains, and co-localize in vessel walls and other basement membrane zones. Nidogen-2 is a cell adhesion protein glycosylated at nitrogen and oxygen sites, and is widely distributed in basement membranes in heart, placenta, bone and, to a lesser extent, in pancreas, kidney and skeletal muscle.

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 β 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.
- Murshed, M., et al. 2000. The absence of Nidogen 1 does not affect murine basement membrane formation. *Mol. Cell. Biol.* 20: 7007-7012.
- Konrad, L., et al. 2000. Mesenchymal entactin-1 (Nidogen-1) is required for adhesion of peritubular cells of the rat testis *in vitro*. *Eur. J. Cell Biol.* 79: 112-120.

CHROMOSOMAL LOCATION

Genetic locus: NID2 (human) mapping to 14q22.1; Nid2 (mouse) mapping to 14 A3.

SOURCE

Nidogen-2 (F-2) is a mouse monoclonal antibody raised against amino acids 211-500 mapping within an internal region of Nidogen-2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ 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-2 (F-2) is recommended for detection of Nidogen-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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-2 siRNA (h): sc-43178, Nidogen-2 siRNA (m): sc-43179, Nidogen-2 shRNA Plasmid (h): sc-43178-SH, Nidogen-2 shRNA Plasmid (m): sc-43179-SH, Nidogen-2 shRNA (h) Lentiviral Particles: sc-43178-V and Nidogen-2 shRNA (m) Lentiviral Particles: sc-43179-V.

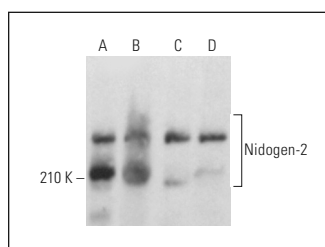
Molecular Weight of Nidogen-2: 200 kDa.

Positive Controls: human placenta extract: sc-363772, human heart extract: sc-363763 or NIH/3T3 whole cell lysate: sc-2210.

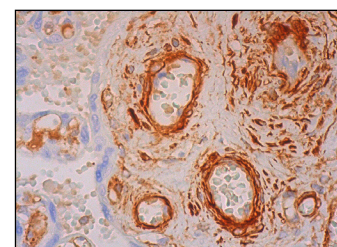
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Nidogen-2 (F-2): sc-377424. Western blot analysis of Nidogen-2 expression in RPE-J (A) and NIH/3T3 (B) whole cell lysates and human heart (C) and human placenta (D) tissue extracts.



Nidogen-2 (F-2): sc-377424. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing pericellular and cytoplasmic staining of smooth muscle cells.

SELECT PRODUCT CITATIONS

- Ocken, A.R., et al. 2020. Perlecan knockdown significantly alters extracellular matrix composition and organization during cartilage development. *Mol. Cell. Proteomics* 19: 1220-1235.

RESEARCH USE

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