

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Nidogen-2 in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 1% cross-reactivity with recombinant human Nidogen-1 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Nidogen-2 Leu31-Lys1375 (Gly832Ala) Accession # Q14112
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Nidogen-2 (also named entactin-2) is a 200 kDa, secreted, monomeric basement membrane glycoprotein (1). Nidogens 1 and 2 are expressed in nearly all basement membranes (1-3) where they interact with laminins, collagen type IV and proteoglycan family members to form structural scaffolds (4, 5). In mouse, Nidogens 1 and 2 appear to substitute for each other. Deletion of one nidogen gives a mild phenotype, but deletion of both nidogens is lethal (6, 7). Affinity of laminin binding is much lower for human Nidogen-2 than that of mouse Nidogen-2, indicating that human Nidogen-2 may not be a strict substitute for Nidogen-1 (1). Both nidogens bind perlecan and collagens I and IV, but only Nidogen-1 binds fibulins (1, 3). The two nidogens show approximately 50% amino acid (aa) identity in human and are structurally similar (1, 4, 6). Cleavage of a 28 aa signal sequence from human Nidogen-2 produces a 1219 aa mature protein containing three globular domains (G1-3) separated by a link region and an extended rod-shaped segment. The G1 domain is reported to bind type IV collagen, the G2 Nidogen (β-barrel) domain interacts with perlecan, and the C-terminal G3 β-propeller structure is associated with laminin binding. The mucin-like link region is longer in Nidogen-2 than nidogen-1, and contains both N- and O-glycosylation (2, 8). There is one EGF-like motif and a short peptide that ligates α₃β₁ integrins. The rod-shaped segment contains four additional EGF-like motifs, two of which bind calcium, and two thyroglobulin type 1 domains that serve as a binding site for α_vβ₃ integrins. Mature human Nidogen-2 is 80% aa identical to both mouse and rat Nidogen-2, and 73% aa identical to both canine and bovine Nidogen-2.

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