

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Nidogen-2 in Western blots. In Western blots, less than 1% cross-reactivity with recombinant human Nidogen-1 is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Chinese hamster ovary cell line CHO-derived recombinant human Nidogen-2 Leu31-Lys1375 (Gly832Ala) Accession # Q14112
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

## 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.

	Recommended Concentration	Sample
<b>Western Blot</b>	0.1 µg/mL	Recombinant Human Nidogen-2 (Catalog # 3385-ND)
<b>Immunohistochemistry</b>	5-15 µg/mL	Immersion fixed paraffin-embedded sections of human kidney

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## 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 α<sub>3</sub>β<sub>1</sub> 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<sub>v</sub>β<sub>3</sub> 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.

## References:

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