# Human Nidogen-2 Alexa Fluor® 532-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF3385X
100 µg

## DESCRIPTION

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| **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<br>Leu31-Lys1375 (Gly832Ala)<br>Accession # Q14112 |
| **Conjugate** | Alexa Fluor 532<br>Excitation Wavelength: 534 nm<br>Emission Wavelength: 553 nm |
| **Formulation** | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*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.*

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

## PREPARATION AND STORAGE

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| **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 $\alpha_3\beta_1$ 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 $\alpha_v\beta_3$ 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.

## PRODUCT SPECIFIC NOTICES

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