

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Nidogen-1/Entactin in ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human Nidogen-2 is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 302117
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Nidogen-1/Entactin Leu29-Lys1114 (Gln1113Arg) Accession # AAH45606.1
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 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.

ELISA Capture (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
ELISA Detection (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	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-1 (also entactin) is a 150 kDa, secreted, monomeric glycoprotein that serves as a major linking component of basement membranes (1-4). It is synthesized as a 1247 amino acid (aa) precursor with a 28 aa signal sequence and a 1219 aa mature protein. The molecule is modular in structure with five distinct regions. There are three globular domains (G1-3) separated by a mucin region and an extended rod-shaped segment (5-7). The N-terminal globular domain (G1) is 200 aa in length and seemingly unrelated to any known motif (8). The mucin region is nearly 160 aa in length and presumably O-glycosylated (2, 8). G2 and G3 are both approximately 300 aa in length. G2 is described as a Nidogen (β-barrel) domain, while C-terminal G3 assumes a β-propeller configuration (1). The 250 aa rod-shaped segment has multiple EGF-like motifs and two thyroglobulin type 1 domains. Functionally, G1 is reported to bind type IV collagen (2, 7). The mucin region contains a short peptide that ligates α₃β₁ integrins (9, 10). G2 interacts with perlecan, and an RGD motif in the rod-shaped segment serves as a binding site for α_vβ₃ integrins (9, 10). Finally, G3 is associated with laminin binding (2, 7). As a full-length molecule, the multiple extracellular matrix-binding sites of Nidogen-1 are well positioned to serve as anchor sites for basement membrane molecules. Nidogen-1 also undergoes proteolytic processing by at least two MMPs, MMP-7 and MMP-19 (10, 11). While this destroys the integrity of Nidogen-associated matrices, it also generates peptide fragments that are capable of inducing neutrophil chemotaxis and phagocytosis (10). Nidogen-2 is related to Nidogen-1 (≈ 50% aa identity) and shares many of the same adhesive properties as Nidogen-1 (12). Both bind perlecan plus collagens I and IV. Nidogen-2, however, does not bind fibulin-1 or 2, and shows only modest interaction with laminin. Thus, although coexpressed, Nidogen-2 serves as only a partial substitute for Nidogen-1 (2, 12). Human Nidogen-1 shares 85% aa sequence identity with both mouse and rat Nidogen-1, and 88% aa sequence identity with canine Nidogen-1.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc., and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.