Human Nidogen-1/Entactin Alexa Fluor® 350-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 302117

Catalog Number: FAB2570U

100 µg

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 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 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 $\alpha_3\beta_1$ integrins (9, 10). G2 interacts with perlecan, and an RGD motif in the rod-shaped segment serves as a binding site for $\alpha_v\beta_3$ 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

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