

## DESCRIPTION

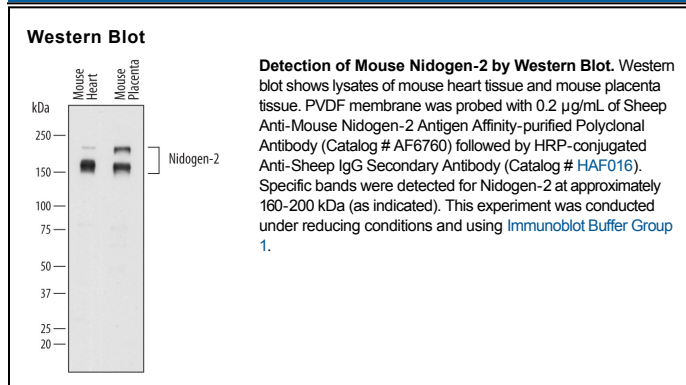
<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse Nidogen-2 in direct ELISAs and Western blots. In direct ELISAs, approximately 25% cross-reactivity with recombinant human Nidogen-2 is observed.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant mouse Nidogen-2 Leu31-Lys1403 Accession # NP_032721
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

## 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>	0.2 µg/mL	See Below

## DATA



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.2 mg/mL.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <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 160-200 kDa, secreted, monomeric basement membrane glycoprotein (1,2). Nidogens 1 and 2 are expressed in nearly all basement membranes (1-4) where they interact with laminins, collagen type IV and proteoglycan family members to form structural scaffolds (5, 6). Mice deleted for both nidogen genes die at birth due to delayed basement membrane maturation of the lungs and heart (1). However, deletion of one nidogen gives a mild phenotype, indicating that their functions overlap (1, 7). In adult, muscle Nidogen-2 expression is concentrated in the basal lamina of synapses and is required for their maturation and maintenance (8). Both nidogens bind laminin, perlecan and collagens I and IV, but only Nidogen-1 binds fibulins (1, 4). The two nidogens share approximately 40% amino acid (aa) identity in mouse and are structurally similar (1, 2, 5). Cleavage of a 30 aa signal sequence from mouse Nidogen-2 produces a 1373 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 ( $\beta$ -barrel) domain interacts with perlecan, and the C-terminal G3  $\beta$ -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 (3, 8). It contains one EGF-like motif, and an RGD motif that binds  $\alpha_3\beta_1$  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. If species-specific insertions and deletions are disregarded, mature mouse Nidogen-2 shares 80%, 92%, 74%, 73%, 71% and 68% aa identity with human, rat, bovine, porcine, canine and equine Nidogen-2, respectively.

**References:**

1. Kohfeldt, K. *et al.* (1998) *J. Mol. Biol.* **282**:99.
2. Schymeinsky, J. *et al.* (2002) *Mol Cell Biol.* **22**: 6820.
3. Miosge, N. *et al.* (2001) *Histochem. J.* **33**:523.
4. Salmivirta, K. *et al.* (2002) *Exp. Cell Res.* **279**:188.
5. Hohenester, E. and J. Engel (2002) *Matrix Biol.* **21**:115.
6. Charonis, A. *et al.* (2005) *Curr. Med. Chem.* **12**:1495.
7. Bader, B.L. *et al.* (2005) *Mol. Cell. Biol.* **25**:6846.
8. Fox, M.A. *et al.* (2008) *Neural Dev.* **3**:24.