

## DESCRIPTION

<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse Endocan/ESM-1 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 25% cross-reactivity with recombinant human Endocan is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant mouse Endocan/ESM-1 Trp20-Arg184 Accession # Q9QYY7
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the antibody by the LAL method.
<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 either lyophilized or as a 0.2 µm filtered solution in PBS.

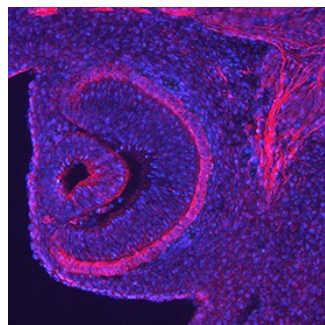
## APPLICATIONS

**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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	0.1 µg/mL	Recombinant Mouse Endocan/ESM-1 (Catalog # 1999-EC)
<b>Immunohistochemistry</b>	5-15 µg/mL	See Below
<b>Neutralization</b>	Measured by its ability to neutralize Endocan/ESM-1-mediated adhesion of the Jurkat human acute T cell leukemia cell line. The Neutralization Dose (ND <sub>50</sub> ) is typically 1-5 µg/mL in the presence of 25 µg/mL Recombinant Mouse Endocan/ESM-1.	

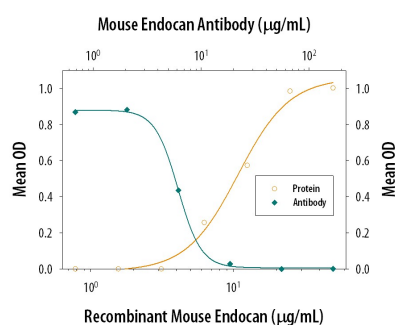
## DATA

### Immunohistochemistry



**Endocan/ESM-1 in Mouse Embryo.**  
Endocan/ESM-1 was detected in perfusion fixed frozen sections of mouse embryo (13 d.p.c.) using Goat Anti-Mouse Endocan/ESM-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1999) at 5 µg/mL overnight at 4 °C. Tissue was stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to the retina. View our protocol for [Fluorescent IHC Staining of Frozen Tissue Sections](#).

### Neutralization



**Cell Adhesion Mediated by Endocan/ESM-1 and Neutralization by Mouse Endocan/ESM-1 Antibody.**  
Recombinant Mouse Endocan/ESM-1 (Catalog # 1999-EC), immobilized onto a microplate, supports the adhesion of the Jurkat human acute T cell leukemia cell line in a dose-dependent manner (orange line). Adhesion elicited by Recombinant Mouse Endocan/ESM-1 (25 µg/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Mouse Endocan/ESM-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1999). The ND<sub>50</sub> is typically 1-5 µg/mL.

## 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. *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

Endocan (endothelial cell proteoglycan; also known as endothelial-cell specific molecule-1 [ESM-1]), is a 50 kDa, monomeric, secreted, cysteine-rich proteoglycan identified initially in endothelial cells of the kidney and lung (1). Mouse Endocan is synthesized as a 184 amino acid (aa) precursor that contains a 21 aa signal sequence and a 20 kDa, 163 aa mature region (2). The N-terminal 2/3 of the molecule contains 18 cysteine residues and there are no potential N-linked glycosylation sites. Based on human Endocan, there are at least two potential O-linked glycosylation sites, one of which will likely be utilized on Ser at position # 136 of the mature molecule (3). The posttranslational modification is approximately 30 kDa in size. It consists of a single dermatan sulfate chain that contains 4-O sulfated N-acetyl galactosamine with  $\alpha$ -iduronate. This chain is suggested to bind HGF and contribute to HGF mitogenic activity (4). Mature mouse Endocan is 96% and 74% aa identical to rat and human Endocan, respectively. In human, there is a potential for an alternate splice variant. It shows a deletion of aa's 82 through 131, a range which would not remove the dermatan sulfate attachment site (4). It is not known if such a splice form exists in mouse. Endocan is expressed by endothelial cells, adipocytes, bronchial epithelium and distal renal tubular epithelium (1, 5, 6). It is upregulated by TNF- $\alpha$  and VEGF, (1, 7) and is known to bind to LFA-1 ( $\alpha_L\beta_2$ ) on the surface of PBMCs, blocking LFA-1 interaction with ICAM-1 (8). Normal circulating levels of Endocan are approximately 1 ng/mL (6).

## References:

1. Lassalle, P. *et al.* (1996) J. Biol. Chem. **271**:20458.
2. Lassalle, P. (1999) Genbank Accession #: Q9QYY7.
3. Bechard, D. *et al.* (2001) J. Biol. Chem. **276**:48341.
4. Aitkenhead, M. *et al.* (2002) Microvasc. Res. **63**:159.
5. Wellner, M. *et al.* (2003) Horm. Metab. Res. **35**:217
6. Bechard, D. *et al.* (2000) J. Vasc. Res. **37**:417.
7. Tsai, J.C. *et al.* (2002) J. Vasc. Res. **39**:148.