

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived
Trp20-Arg184, with a C-terminal 10-His tag
Accession # Q9NQ30

N-terminal Sequence Analysis Trp20

Predicted Molecular Mass 19.5 kDa

SPECIFICATIONS

SDS-PAGE 24-27 kDa, reducing conditions

Activity Measured by its ability of the immobilized protein to support the adhesion of Jurkat human acute T cell leukemia cells. Bechard, D. *et al.* (2001) J. Immunol. **167**:3099.
When 1×10^5 cells/well are added to Recombinant Human Endocan/ESM coated plates, adhesion is induced in a dose dependent manner after a 1 hour incubation at 37 °C. The ED₅₀ for this effect is 2-10 µg/mL.

Optimal dilutions should be determined by each laboratory for each application.

Endotoxin Level <1.0 EU per 1 µg of the protein by the LAL method.

Purity >90%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

Formulation Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 100 µg/mL in sterile PBS.

Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Endocan, also known as endothelial-cell specific molecule-1 (ESM-1), is a secreted cysteine-rich dermatan sulfate (DS) proteoglycan primarily expressed by endothelial cells within the vascular capillary network in kidney and in the alveolar walls of the lung (1). Endocan expression has also been detected in different epithelia and in adipocytes (2, 3). The expression of endocan is upregulated by TNF α , IL-1 β or lipopolysaccharide and down-regulated by IFN γ (1). The human Endocan gene encodes a 184 amino acid (aa) residues precursor protein with a 19 aa hydrophobic signal peptide and a 165 aa mature region with 18 Cysteine residues (1). The DS chain is covalently attached to serine 137 (4). Endocan has been shown to bind CD11a/CD18 integrin (also known as lymphocyte function-associated antigen-1, LFA-1) on human lymphocytes, monocytes and Jurkat cells, inhibiting its binding to ICAM-1 and reducing LFA-1-mediated leukocyte activation (5). Endocan binds via its DS chain to hepatocyte growth factor (HGF) to enhance HGF mitogenic activity (3, 6). Genetically engineered cells overexpressing endocan has been shown to induce tumor formation, suggesting that Endocan may be involved in the pathophysiology of tumor growth *in vivo* (3, 6). Circulating Endocan can be detected in the serum from healthy subjects. In patients with lung cancer or acute and severe sepsis, elevated Endocan concentrations have been reported (2, 6).

References:

1. Lassalle, P. *et al.* (1996) J. Biol. Chem. **271**:20458.
2. Bechard, D. *et al.* (2000) J. Vasc. Res. **37**:417.
3. Wellner, M., *et al.* (2003) Horm. Metab. Res. **35**:217.
4. Bechard, D. *et al.* (2001) J. Biol. Chem. **276**:48341.
5. Bechard, D. *et al.* (2001) J. Immunol. **167**:3099
6. Scherpereel, A. *et al.* (2003) Cancer Res. **63**:6084.