



# Recombinant Protein Technical Manual

**Recombinant Mouse ESM1/Endocan Protein  
(Human Cells, His Tag)**  
RPES4770

## Product Data:

**Product SKU:** RPES4770

**Size:** 10µg

**Species:** Mouse

**Expression host:** Human Cells

**Uniprot:** Q9QYY7

## Protein Information:

**Molecular Mass:** 19.0 kDa

**AP Molecular Mass:** 20 kDa

**Tag:** C-6His

**Bio-activity:**

**Purity:** > 95 % as determined by SDS-PAGE

**Endotoxin:** < 1.0 EU per µg as determined by the LAL method.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from a 0.2 µm filtered solution of PBS, pH7.4.

**Reconstitution:** Please refer to it for detailed information.

**Application:**

**Synonyms:** Endothelial cell-specific molecule 1; ESM; Esm1; Endocan

## Immunogen Information:

**Sequence:** Trp20-Arg184

## Background:

Endothelial cell-specific molecule-1 (ESM)—so-called endocan—is a novel endothelium derived soluble dermatan sulfate proteoglycan (PG) that is constitutively expressed by endothelial cells in lungs and kidneys and can be detected in human blood. It is encoded by the ESM1 gene. The expression of this gene is regulated by several cytokines and growth factors, such as vascular endothelial growth factor. Inflammatory cytokines, such as interleukin (IL) $\beta$  and tumor necrosis factor (TNF)- $\alpha$ , stimulate the upregulation of endocan mRNA and the secretion of endocan from endothelial cells. The binding of circulating endocan to leukocyte ligand for ICAM—Lymphocyte Function-associated Antigen (LFA) and to leukocyte ligand for VCAM—Very Late Antigen-4 (VLA-4) is important in leukocyte adhesion and interaction with activated endothelium. Endocan is a key player in the regulation of major processes such as cell adhesion in inflammatory disorders and tumor progression.