

Human recombinant Endocan (20 kDa)

Without DS / CS chain attached to the serine 137

Essential Notes

Cat. Number : LIP-1002

Biomolecule : endocan

Concentration: 100 µg/mL

Size :

10 µg – LIP-1002-10U

50 µg – LIP-1002-50U

Formulation : PBS pH 7.4

Storage : -20°C

Applications : ELISA, Bioassays, standard for quantification

FOR RESEARCH USE ONLY

Description

Endocan also called endothelial cell specific molecule-1 (ESM-1) is a secreted proteoglycan of 50 kDa constituted by a protein core of 20 kDa and a single chain of dermatan sulfate linked to the serine 137 (Bechard et al 2001 ; Sarrazin et al 2010). Our reference LIP-1002 is a 20 kDa human recombinant endocan secreted without its CS/DS chain.

Source

The 20 kDa recombinant human endocan / ESM-1 is produced in HEK293 cells transformed with cDNA encoding for human endocan S137A mutant (Bechard et al. 2001). Recombinant endocan produce by this cell line was purified by ion exchange chromatography followed by affinity chromatography using a monoclonal anti-human endocan antibody. These engineered cells released a 20 kDa endocan without the glycosaminoglycan chain.

Molecular Mass

Human recombinant endocan without DS/CS chain on serine 137 is secreted as a 20 kDa protein.

Formulation

The purified 20 kDa recombinant endocan / ESM-1 is diluted in a solution of phosphate buffer saline (PBS) at 100 µg/mL.

Storage

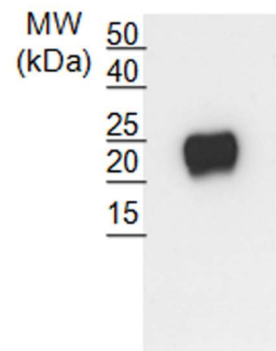
Upon reception, store at -20 to -80°C for long term storage. Avoid repeated freeze-thaw cycles.

Applications

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

Western Blot (WB) : Can be used as a standard for molecular weight (20 kDa).

ELISA : Can be used for the quantification of human endocan in serum, plasma or culture supernatant as a standard.



Western blot analysis of Recombinant Human Endocan devoids of its glycan chain (reduced condition). Endocan 20 kDa was detected using the purified mAb MEP14 (LIA-1001).

■ Bibliography related to endocan

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■ Background

Endocan, also known as endothelial cell-specific molecule (ESM-1), was originally discovered by Lassalle and collaborators in endothelial cells. Structurally, endocan is a dermatan sulfate proteoglycan of 50 kDa that is freely circulating in blood. Endocan binds CD11a/CD18 integrin (also called LFA-1 for Leukocyte Function-associated Antigen-1) on human leukocytes inhibiting consequently its binding to ICAM-1 and transendothelial migration. Moreover, endocan has been recently described as a biomarker of tip cells and neoangiogenesis. The expression of endocan is upregulated by pro-inflammatory molecules such as tumor necrosis factor alpha, and pro-angiogenic molecules such as vascular endothelial growth factor and fibroblast growth factor 2. Endocan binds via its dermatan sulfate chain to hepatocyte growth factor/ scatter factor. Endocan appears as a pertinent biomarker of endothelial dysfunction.

■ Companion products

- Anti-human endocan/ESM-1 mAb (N-ter) ; clone MEP08 : [LIA-0901](#)
- Anti-murine endocan/ESM-1 mAb (C-ter) ; clone MEP14 : [LIA-1001](#)
- Anti-human endocan/ESM-1 mAb (N-ter) ; clone MEP21 : [LIA-0902](#)
- Human recombinant endocan/ESM-1 (50 kDa) : [LIP-1001](#)
- DIYEK H1 (Do It Yourself Elisa Kit for Human Endocan quantification) : [LIK-1101](#)
- DIYEK C1 (Do It Yourself Elisa Kit for human Endocan and Cathepsin G-cleaved Endocan) : [LIK-1501](#)
- JDIEK H1 (Just Do It Elisa Kit for Human Endocan quantification) : [LIK-1201](#)

Not intended for use as a therapeutic agents or in diagnostic procedures. Not for use in humans or animals.