PRODUCT INFORMATION

ICAM-1/CD54 Extracellular Domain (human, recombinant)

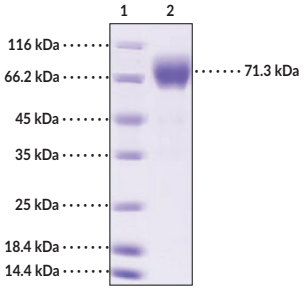
Item No. 44187

Overview and Properties

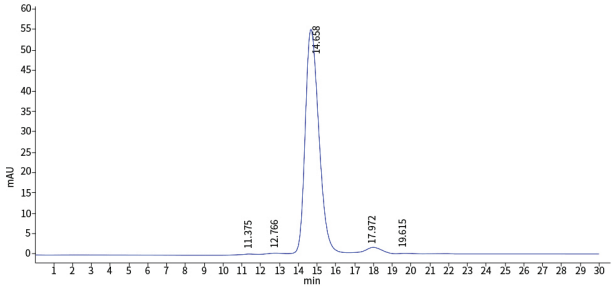
Synonyms:	ICAM-1, Intercellular Adhesion Molecule-1
Source:	Recombinant human C-terminal DDDDK-tagged ICAM-1 extracellular domain expressed in HEK293 cells
Amino Acids:	1-480
Uniprot No.:	P05362
Molecular Weight:	50.2 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	≥95% estimated by SDS-PAGE
Supplied in:	Lyophilized from sterile PBS, pH 7.4
Endotoxin Testing:	<1.0 EU/µg, determined by the LAL endotoxin assay
Bioactivity:	See figures for details

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images



Lane 1: MW Markers
Lane 2: ICAM-1/CD54 Extracellular Domain



SDS-PAGE Analysis of ICAM-1/CD54 Extracellular Domain. This protein has a calculated molecular weight of 50.2 kDa. It has an apparent molecular weight of approximately 71.3 kDa by SDS-PAGE under reducing conditions due to glycosylation.

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

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Description

Intercellular adhesion molecule-1 (ICAM-1), also known as CD54, is a cell surface glycoprotein and member of the Ig superfamily.[1] It is composed of five extracellular Ig domains, which can vary in number through alternative splicing, a transmembrane domain, and a short C-terminal cytoplasmic domain.[2,3] ICAM-1 is basally expressed at low levels but cytokines, such as NF-κB, TNF-α, and IL-1α, increase ICAM-1 levels in endothelial, epithelial, and immune cells.[4] It binds integrins, such as lymphocyte function-associated antigen-1 (LFA-1) and complement 3 receptor (C3R), and directs lymphocytes or other immune cells to locally inflamed areas, among other roles in forming epithelial and endothelial barriers, regulating cell migration, and immune signaling.[1,2,5] ICAM-1 can be cleaved from the cell membrane by cathepsin G or neutrophil elastase and promote or antagonize inflammation in a context-dependent manner and induce wound healing.[1,3] Blood levels of soluble ICAM-1 are increased in patients with cancer, and serum levels of soluble ICAM-1 are increased in patients with acute ischemic stroke.[6,7] Cayman's ICAM-1/CD54 Extracellular Domain (human, recombinant) protein consists of 459 amino acids and has a calculated molecular weight of 50.2 kDa. By SDS-PAGE, under reducing conditions, the apparent molecular mass of the protein is 71.3 kDa due to glycosylation.

References

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7. Shyu, K.G., Chang, H. and Lin, C.C. Serum levels of intracellular adhesion molecule-1 and E-selectin in patients with acute ischaemic stroke. *J. Neurol.* **244(2)**, 90-93 (1997).

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