Recombinant Human ESAM

FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no:	**300-057**
Size:	20 µg
Lot. No.:	According to product label
Country of origin:	Germany

Scientific Background

Gene:	*ESAM*
Synonyms:	Endothelial cell-selective adhesion molecule

Endothelial cellselective adhesion molecule (ESAM) is a 55 kDa type I transmembrane glycoprotein that belongs to the JAM family of immunoglobulin superfamily molecules. Human ESAM is synthesized as a 390 amino acid (aa) protein composed of a 29 aa signal peptide, a 216 aa extracellular region, a putative 26 aa transmembrane segment, and a 119 aa cytoplasmic domain. The extracellular region contains one V-type and one C2-type Ig domain and is involved in hemophilic adhesion. In the cytoplasmic domain, there is a docking site for the multifunctional adaptor protein MAGI1. The extracellular region of human ESAM shows 90%, 74%, 69% and 67% aa identity with monkey, canine, mouse and rat extracellular ESAM, respectively. ESAM is expressed on endothelial cells, activated platelets and megakaryocytes, and can be found associated with cell to cell junctions. Whether ESAM is restricted to a particular junctional type is not clear. ESAM deficient mice have no defect in vascularization but do have reduced angiogenic potential. This may be due to a decreased migratory response to FGF2. Soluble ESAM is fused to a C-terminal His-tag (6x His).

References

1. Hirata et al, J Biol Chem 276 (2001)
2. Nasdala et al, J Biol Chem 277 (2002)
3. Wegmann et al, Exp Cell Res 300 (2004)
4. Ishida et al, J Biol Chem 278 (2003)

Sequence

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ISLPGPLVTNLLRFLFLGLSALAPPSRAQLQLHLPANRLQAVEGGE
VVLPAWYTLHGEVSSSQPWEVPFVMWFFKQKEKEDQVLSYINGVTT
SKPGVSLVYSMPSRNLSLRLEGLQEKDSGPYSCSVNVQDKQGKSRG
HSIKTLELNVLVPPAPPSCRLQGVPHVGANVTLSCQSPRSKPAVQY
QWDRQLPSFQTFFAPALDVIRGSLSLTNLSSSMAGVYVCKAHNEVG
TAQCNVTLEVSTGPGARSHHHHHH
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Database References

Protein RefSeq:	NP_620411.2
Uniprot ID:	Q96AP7
mRNA RefSeq:	NM_138961.2

Product Specifications

Expressed in	E.coli
Purity	> 95% by SDS-PAGE & silver stain
Buffer	PBS
Stabilizer	None
Formulation	lyophilized
Length (aa):	254
MW:	27,86 kDa
Result by N-terminal sequencing	UNDER WORK!

Stability: The lyophilized human ESAM, though stable at room temperature, is best stored desiccated below 0°C.

Reconstitution: Human ESAM should be reconstituted in sterile water to a concentration of 0.1 mg/ml. This solution can be diluted in water or other buffer solutions or stored at -20°C.

AVOID REPEATED FREEZE AND THAW CYCLES!

Biological Activity: No biological data available at the moment.

RELIA*Tech* GmbH
Phone: +49 (0)5331 8586 987 • Fax: +49 (0)5331 8586 989 • E-mail: info@reliatech.de • web: www.reliatech.de
Location: Lindener Str. 15, 38300 Wolfenbüttel, Germany

Recombinant Human ESAM

Handling/Application

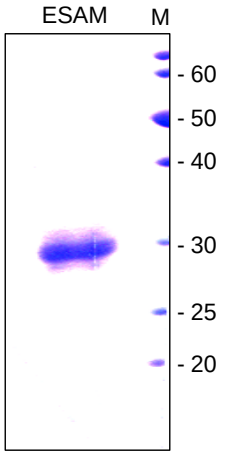

Figure 1. SDS-PAGE analysis of recombinant human ESAM. Sample was loaded in 15% SDS-polyacrylamide gel under reducing conditions and stained with Coomassie blue.

RELIA*Tech* GmbH
Phone: +49 (0)5331 8586 987 • Fax: +49 (0)5331 8586 989 • E-mail: info@reliatech.de • web: www.reliatech.de
Location: Lindener Str. 15, 38300 Wolfenbüttel, Germany