Anti-human ESAM

20161213BB

FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	**102-PA42AG**
Size:	50 µg
Lot. No.:	According to product label
Country of origin:	Germany

Preparation: Produced from sera of rabbits pre-immunized with highly pure (>95%) recombinant human ESAM (Ile30-Ala248) derived from insect cells.

Target Background

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.

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)

Database References Antigen

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

Product Specifications

Species reactivity	human
Clone/Ab feature	Rabbit IgG
Cross reactivity	ND
Host	rabbit
Clonality	polyclonal
Purification	Antigen affinity purified
Immunogen	Recombinant human ESAM (RT #300-057)
Formulation	lyophilized
Buffer	PBS

Stability: The lyophilized antibody is stable at room temperature for up to 1 month. The reconstituted antibody is stable for at least two weeks at 2-8°C. Frozen aliquots are stable for at least 6 months when stored at -20°C.

Reconstitution: Centrifuge vial prior to opening. Reconstitute in sterile water to a concentration of 0.1-1.0 mg/ml.

AVOID REPEATED FREEZE AND THAW CYCLES!

Applications

Western Blot:	Use 2-5 µg/ml
FACS:	Use 1-5 µg/ml
IF/IHC	IF: Use 2-10µg/ml.

NOTE: OPTIMAL DILUTIONS SHOULD BE DETERMINED BY EACH LABORATORY FOR EACH APPLICATION!

Anti-human ESAM

Handling/Applications

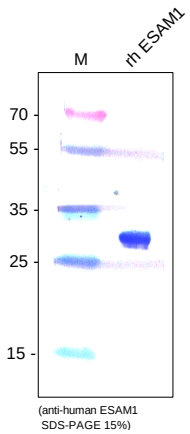

Figure 1. Western analysis of recombinant human ESAM1 (RT# 300-057) using a polyclonal antibody directed against recombinant human ESAM1 produced in E. coli.

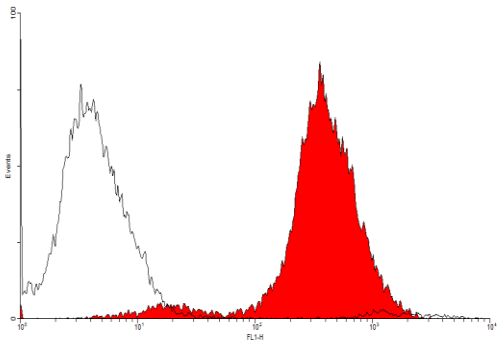

Figure 2. FACS analysis with primary human umbilical vein endothelial cells (HUVEC).

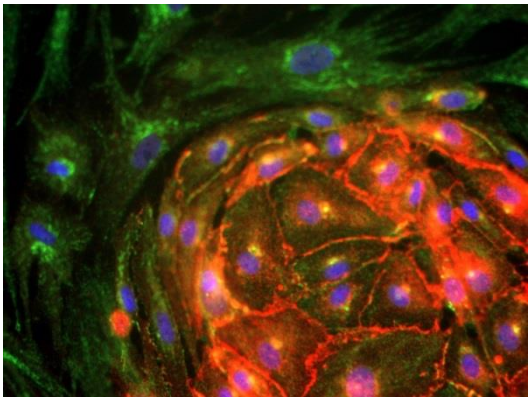

Figure 3: Immunofluorescence staining with a mixture of primary human dermal lymphatic endothelial cells (HDLEC) / normal human dermal fibroblasts (NHDF) with anti-human ESAM (green) [**Cat# 102-42AG**] and anti-human CD31 (red) [**Cat# 101-M92**]. Counter staining of nuclei was done with Dapi. As secondary antibodies goat anti-mouse PE (1:300) and goat anti-rabbit ALEXA Flour 488 (1:600) was used.

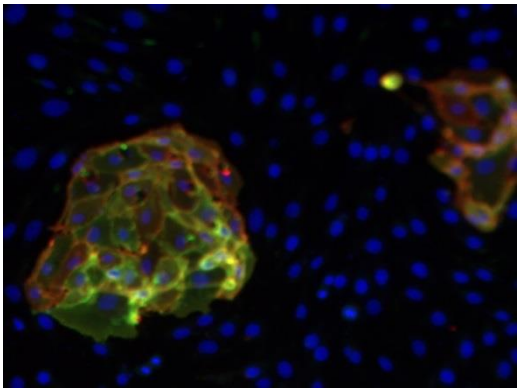

Figure 4: Immunofluorescence staining of CD31 (red) and ESAM (green) in a mixture of primary human dermal lymphatic endothelial cells (HDLEC) and the mouse myoblast cell line C2C12 with monoclonal mouse anti-human CD31 #WM-59 [**Cat# 101-M92**] and polyclonal rabbit anti-human ESAM [**Cat# 102-PA42AG**]. Counter staining of nuclei was done with Dapi. As secondary antibodies goat anti-mouse PE (1:400) and goat anti-rabbit ALEXA Flour 488 (1:600) was used. [5/2µg/ml; 200X]