# Human ESAM Antibody

Monoclonal Mouse $IgG_{2B}$ Clone # 408519

Catalog Number: MAB4204

## DESCRIPTION

| | |
|---|---|
| **Species Reactivity** | Human |
| **Specificity** | Detects human ESAM in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant mouse ESAM is observed. |
| **Source** | Monoclonal Mouse $IgG_{2B}$ Clone # 408519 |
| **Purification** | Protein A or G purified from hybridoma culture supernatant |
| **Immunogen** | Mouse myeloma cell line NS0-derived recombinant human ESAM<br>Gln30-Ala247<br>Accession # Q96AP7 |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS. |

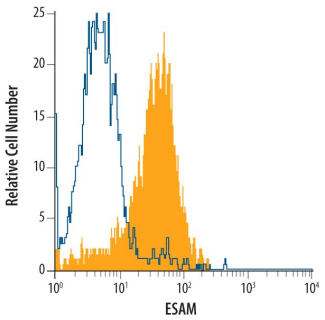
## APPLICATIONS

**Please Note:** *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

| | Recommended Concentration | Sample |
|---|---|---|
| **Flow Cytometry** | 0.25 µg/$10^6$ cells | See Below |
| **Immunocytochemistry** | 8-25 µg/mL | See Below |
| **CyTOF-ready** | Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation. | |

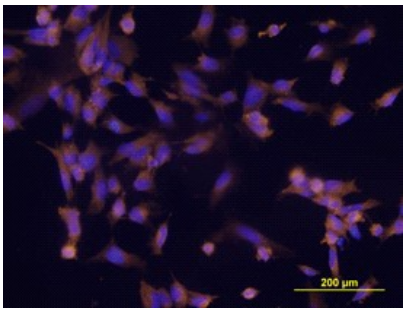
## DATA

### Flow Cytometry




**Detection of ESAM in HUVEC Human Cells by Flow Cytometry.** HUVEC human umbilical vein endothelial cells were stained with Mouse Anti-Human ESAM Monoclonal Antibody (Catalog # MAB4204, filled histogram) or isotype control antibody (Catalog # MAB0041, open histogram), followed by Phycoerythrin-conjugated Anti-Mouse IgG $F(ab')_2$ Secondary Antibody (Catalog # F0102B).

### Immunocytochemistry




**ESAM in HUVEC Human Cells.** ESAM was detected in immersion fixed HUVEC human umbilical vein endothelial cells using Mouse Anti-Human ESAM Monoclonal Antibody (Catalog # MAB4204) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (yellow; Catalog # NL007) and counterstained with DAPI (blue). View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

## PREPARATION AND STORAGE

| | |
|---|---|
| **Reconstitution** | Reconstitute at 0.5 mg/mL in sterile PBS. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>● 12 months from date of receipt, -20 to -70 °C as supplied.<br>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>● 6 months, -20 to -70 °C under sterile conditions after reconstitution. |

## BACKGROUND

Endothelial cell-selective adhesion molecule (ESAM) is a 55 kDa type I transmembrane glycoprotein that belongs to the JAM family of immunoglobulin superfamily molecules (1, 2). 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 homophilic adhesion (1). In the cytoplasmic domain, there is a docking site for the multifunctional adaptor protein MAGI-1 (3). 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 (1, 2). ESAM deficient mice have no defect in vascularization but do have reduced angiogenic potential. This may be due to a decreased migratory response to FGF-2 (4).

**References:**


1. Hirata, K-I. *et al.* (2001) J. Biol. Chem. **276**:16223.
2. Nasdala, I. *et al.* (2002) J. Biol. Chem. **277**:16294.
3. Wegmann, F. *et al.* (2004) Exp. Cell Res. **300**:121.
4. Ishida, T. *et. al.* (2003) J. Biol. Chem. **278**:34598.





bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449