



Peninsula Laboratories, LLC

A Member of the Bachem Group

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FITC Labeled Monoclonal Antibody to Human CD62E E-Selectin, ELAM-1, LECAM-2

Monoclonal antibody 4D10 is a very useful antibody for the characterization of acute (early) inflamed endothelium. It is also expressed on endothelium in chronic inflammatory lesions of the skin and synovium. In combination with other endothelial markers it allows a differentiated characterization of tumorous and inflammatory tissues. CD62E belongs to the selectin family and is thought to mediate rolling of myeloid cells and a subset of memory T cells on activated endothelium.

Product Number:	T-1112
Clone:	4D10
Host species, isotype:	Rat IgG2a
Quantity:	500µg
Format:	Affinity purified, FITC labelled, liquid Supplied as 1ml solution. This stock solution contains 0.5mg/ml IgG, phosphate buffered saline pH 7.2 (PBS), 10mg/ml bovine serum albumin (BSA) as a stabilizer and 0.1% sodium azide as a preservative.
Stability:	6 months at 4° - 8°C
Applications:	Has been reported to work in FACS. Approximate working dilution: Optimal dilutions should be determined by the end user. Suggested positive control: Human endothelial cells in acutely inflamed tonsil.
Immunogen:	LPS-stimulated human endothelial cells.
Antigen, epitope:	The antigen is CD62E, the epitope has not been characterized.
Antigen distribution:	Isolated cells: Positive on LPS, TNF α , IL-1, or TPA stimulated endothelial cells (HUVECs) in tissue culture. No cross reactivity with other cell types known. Tissue sections: Strongly positive on human endothelial cells in acutely inflamed tissues such as atopic dermatitis or contact dermatitis 24h after sensitization; in the healthy spleen and lymph node. Few single cells express the 4D10 antigen. The antigen is generally absent in chronically inflamed tissues.



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Biochemistry:

The antigen is a 589 amino acid transmembrane protein. It consists of a C-type lectin-like domain, an epidermal growth factor (EGF)-like domain, six short consensus repeat (SCR) domains, a transmembrane domain and a cytoplasmic tail. CD62E is a counter-receptor for sialyl Lewis X, sialyl Lewis a and CLA (cutaneous lymphocyte antigen). It is involved in adhesion between myeloid cells and activated endothelium, and supports leucocytes rolling. Some skin-associated memory T cells express CLA, and it may be that CD62E is also involved in their homing to cutaneous sites of chronic inflammation. In addition, CD62E may also be involved in tumour metastasis. A soluble form of CD62E has been reported to mediate angiogenesis in pathological disorders.

Specificity:

Human: CD62E.

Other: Not tested.

Selected references

Goerdts, S. et al.: Characterization and expression kinetics of an endothelial cell activation antigen present in vivo only in acute inflammatory tissues. *Exp. Cell Biol.* 55: 117-26 (1987)

Goebeler, M. et al.: The contact allergens Nickel Chloride and Cobalt Chloride directly induce expression of endothelial adhesion molecules. *Behring Inst. Mitt.* 92: 191-201 (1993)

For in vitro research only. Caution: this product contains sodium azide, a poisonous