



Anti-mouse Pan-endothelial Cell Antigen (MECA32)



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

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|--------------------|----------------------------|
| Cat.-no.: | 103-M42 |
| Size: | 100 µg |
| Lot. No.: | According to product label |
| Country of origin: | Germany |

Preparation: Monoclonal antibodies were produced using mouse lymph-node stromal cells as the immunizing antigen.

Target Background

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| Synonyms: | Plasmalemma vesicle-associated protein, MECA-32 antigen, PV-1 |
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The MECA-32 antibody reacts with a dimer of 50-55-kDa subunits expressed on most or all endothelial cells in the embryonic and adult mouse, with the exception of cardiac and skeletal muscle and the brain. Recent reports have shown that the antigen is the plasmalemma vesicle-associated protein (also named Plasmalemma vesicle protein-1, PV-1 or MECA-32 antigen), a type II membrane protein. It is a membrane-associated protein of caveolae and is found in fenestral and stomatal diaphragms in fenestrated endothelia and transendothelial channels. Normally in skeletal and cardiac muscle, MECA-32 antigen expression is limited to small arterioles and venules; however, under conditions of inflammation, it can be induced on previously non-expressing vessels in cardiac muscle. In the central nervous system (CNS), the pan-endothelial cell antigen expression is developmentally regulated. During embryonic development, the antigen is found on brain vasculature up to day 16 of gestation, after which it disappears. The cessation of MECA-32 antigen expression in the CNS may be associated with the establishment of the blood-brain barrier, which begins on day 16 of gestation. In the adult mouse, inflammation in the CNS can lead to re-expression of the pan-endothelial cell antigen.

References

1. Leppink et al, Transplantation 48:874, 1989
2. Hallmann et al, Dev Dyn 202:325, 1995
3. MacPhee et al, J Leukoc Biol 55:467, 1994
4. Orosz et al., Transplantation 56:453, 1993
5. Pelletier et al., Transplantation. 55:315, 1993
6. Stan et al, Genomics 72:304, 2001

Database References Antigen

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|------------------------|-------------|
| Protein RefSeq: | NP_115774.2 |
| Uniprot ID: | Q91VC4 |
| mRNA RefSeq: | NM_032398.2 |

Product Specifications

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| Species reactivity | mouse |
| Clone/Ab feature | IgG2a |
| Cross reactivity | ND |
| Host | rat |
| Clonality | monoclonal |
| Purification | Protein G purified |
| Immunogen | mouse lymph-node stromal cells |
| 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!

Specificity: The MECA-32 antibody reacts with the "Plasmalemma vesicle-associated protein", a dimer of 50-55-kDa subunits expressed on most or all endothelial cells surfaces in the embryonic and adult mouse, with the exception of cardiac and skeletal muscle and the brain. **The MECA-32 antibody is specific for mouse BECs but not LECs.**

Applications

Western Blot: Use at 1-10 µg/ml

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



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Handling/Applications

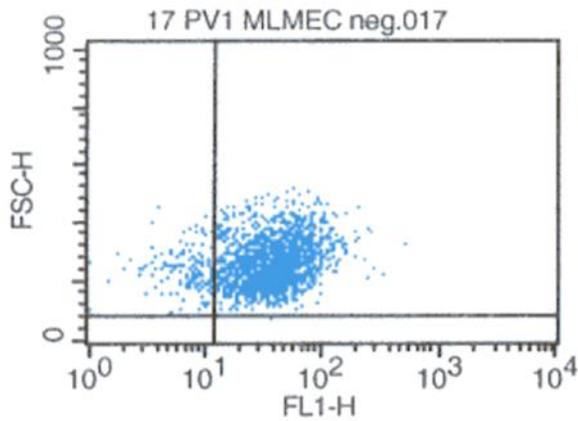


Figure 1: FACS analysis with mouse lung microvascular endothelial cells (MLMEC).

This antibody has been tested by immunofluorescent staining (≤ 1 $\mu\text{g}/\text{million}$ cells) with flow cytometric analysis (FACS) to assure specificity and reactivity. Other reported applications include immunoprecipitation (IP), immunohistochemical staining (IHC) of acetone frozen sections, immunocytochemistry, and western blot analysis (WB).