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Anti-murine Panendothelial Cell Antigen (#MECA-32)

(Plasmalemma vesicle-associated protein, Plasmalemma vesicle protein-1, PV-1, MECA-32 antigen)

Description: Monoclonals were produced using mouse lymph-node stromal cells as the immunizing antigen. Rat IgG2a antibody from hybridoma was purified from cell culture supernatant by Protein G chromatography.

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 panendothelial cell antigen expression is developmentally regulated.^{2,5} 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 panendothelial cell antigen.

Host species	Rat
Antigen:	Mouse lymph-node stromal cells
Purification:	Protein G chromatography
Stabilizer:	none
Buffer:	PBS pH 7.4 w/o preservative
Formulation:	lyophilized

Reconstitution: When reconstituted in sterile water to a concentration of 1.0 mg/ml the antibody is stable for at least six weeks at 2-4°C.

Stability: The lyophilized antibody, thought stable at room temperature, is best stored desiccated below 0°C. Reconstituted anti-murine MECA-32 is stable at 4°C for >one month or can be stored in working aliquots at -20°C for more than six months.

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.

Application

This antibody has been tested by immunofluorescent staining (= 1 µg/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).

Optimal dilutions should be determined by each laboratory for each application.

Usage: Anti-murine MECA-32 is offered for research use. Not for drug use. **Not for human use!**

Catalogue number: 103-M42	Size: 100 µg
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[**Literature:** Leppink et al., Transplantation 48:874, 1989; Hallmann et al., Dev Dyn. 202:325, 1995; MacPhee et al., J Leukoc Biol. 55:467, 1994; Orosz et al., Transplantation. 56:453, 1993; Pelletier et al., Transplantation. 55:315, 1993 ; Stan et al., Genomics 72:304, 2001]

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