

# pan ECA (MECA-32): sc-19603

## BACKGROUND

The vascular network is a highly branched closed circuit of blood vessels, which extends throughout the body and mediates the delivery and exchange of blood. Blood vessels consist of an endothelium, which is a continuous, cylindrical epithelial cell layer, a basal lamina, and an outer mural cell layer. In addition to blood vessels, endothelial cells line the interiors of tissue cavities and spaces. MECA-32 is a mouse monoclonal antibody that shows high specificity for mouse endothelium in both embryonic and mature tissues. The MECA-32 antigen is expressed on most endothelial cells of the embryonic and adult mouse, with the exception of brain, skeletal, and cardiac muscle. In skeletal and cardiac muscle, small arterioles and venules express the MECA-32 antigen. In the brain, MECA-32 expression negatively correlates with the differentiation of the vasculature to form the blood brain barrier.

## REFERENCES

- Schmid-Schonbein, H., et al. 1984. Biology of red cells: non-nucleated erythrocytes as fluid drop-like cell fragments. *Int. J. Microcirc. Clin. Exp.* 3: 161-196.
- Hallmann, R., et al. 1995. Novel mouse endothelial cell surface marker is suppressed during differentiation of the blood brain barrier. *Dev. Dyn.* 202: 325-333.
- Beilhack, A., et al. 2003. Immune traffic: a functional overview. *Lymphat. Res. Biol.* 1: 219-234.
- Esmon, C.T. 2004. Interactions between the innate immune and blood coagulation systems. *Trends Immunol.* 25: 536-542.

## SOURCE

pan ECA (MECA-32) is a rat monoclonal antibody raised against mouse lymph node stromal cells.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

pan ECA (MECA-32) is available conjugated to agarose (sc-19603 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-19603 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-19603 PE), fluorescein (sc-19603 FITC), Alexa Fluor® 488 (sc-19603 AF488), Alexa Fluor® 546 (sc-19603 AF546), Alexa Fluor® 594 (sc-19603 AF594) or Alexa Fluor® 647 (sc-19603 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-19603 AF680) or Alexa Fluor® 790 (sc-19603 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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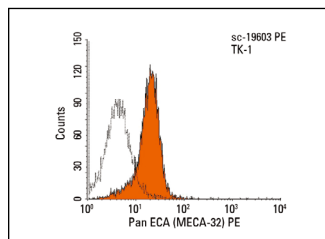
## APPLICATIONS

pan ECA (MECA-32) is recommended for detection of a dimer of subunits expressed on endothelial cells in embryonic and adult mouse, with the exception of cardiac muscle, skeletal muscle and brain of mouse origin by immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10<sup>6</sup> cells).

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



pan ECA (MECA-32) PE: sc-19603 PE. FCM analysis of TK-1 cells. Black line histogram represents the isotype control, normal rat IgG<sub>2a</sub>-PE: sc-2872.

## SELECT PRODUCT CITATIONS

- Herrnberger, L., et al. 2012. The role of plasmalemma vesicle-associated protein (PLVAP) in endothelial cells of Schlemm's canal and ocular capillaries. *Exp. Eye Res.* 105: 27-33.
- He, H., et al. 2012. Endothelial cells provide an instructive niche for the differentiation and functional polarization of M2-like macrophages. *Blood* 120: 3152-3162.
- Cho, H.Y., et al. 2013. Exacerbated airway toxicity of environmental oxidant ozone in mice deficient in Nrf2. *Oxid. Med. Cell. Longev.* 2013: 254069.
- Herrnberger, L., et al. 2014. Formation of fenestrae in murine liver sinusoids depends on plasmalemma vesicle-associated protein and is required for lipoprotein passage. *PLoS ONE* 9: e115005.
- Muralimanoharan, S., et al. 2016. Sexual dimorphism in activation of placental autophagy in obese women with evidence for fetal programming from a placenta-specific mouse model. *Autophagy* 12: 752-769.
- King, A., et al. 2016. Tumor-homing peptides as tools for targeted delivery of payloads to the placenta. *Sci. Adv.* 2: e1600349.
- Seaman, S., et al. 2017. Eradication of tumors through simultaneous ablation of CD276/B7-H3-positive tumor cells and tumor vasculature. *Cancer Cell* 31: 501-515.e8.
- Li, Q.F., et al. 2018. Activation of Ras in the vascular endothelium induces brain vascular malformations and hemorrhagic stroke. *Cell Rep.* 24: 2869-2882.
- Kuppe, C., et al. 2018. Inverse correlation between vascular endothelial growth factor back-filtration and capillary filtration pressures. *Nephrol. Dial. Transplant.* 33: 1514-1525.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.