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Monoclonal Antibody to CD34 - PE

Alternate names: Hematopoietic progenitor cell antigen CD34, Hematopoietic progenitor cell marker

Catalog No.: SM1603RT

Quantity: 25 Tests

Background: The highly glycosylated 75-120 kD antigen CD34 is possibly an adhesion molecule with a putative role in early hematopoiesis by mediating the attachment of stem cells to the bone marrow extracellular matrix or directly to stromal cells. It could act as a scaffold for the attachment of lineage specific glycans, allowing stem cells to bind to lectins expressed by stromal cells or other marrow components. CD34 is thought to have a role in presenting carbohydrate ligands to selectins. The intracellular chain of the CD34 antigen is a site of phosphorylation by activated protein kinase C, suggesting a putative role in signal transduction. Two isoforms of CD34 have been reported to be generated by alternative splicing. CD34 is highly expressed on hematopoietic progenitors, as well as on endothelial cells, brain, and testis. Staining for CD34 has been used to measure angiogenesis, which reportedly predicts tumor recurrence.

Uniprot ID: Q64314

NCBI: NP_598415.1

GeneID: 12490

Host / Isotype: Rat / IgG2a

Clone: MEC14.7

Format: **State:** Lyophilized purified IgG fraction.
Purification: Affinity Chromatography on Protein G.
Buffer System: PBS, pH 7.4 containing 0.09% Sodium Azide as preservative, 5% Sucrose and 1% BSA as stabilizer.
Label: PE – R. Phycoerythrin (RPE)
Reconstitution: Restore with 0.25 ml (SM1603RT) or 1.0 ml (SM1603R) distilled water.

Applications: **Flow Cytometry:** Use 10 µl of neat-1/5 diluted antibody to label 10e6 cells in 100 µl.
The Fc region of monoclonal antibodies may bind non-specifically to cells expressing low affinity fc receptors.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: This antibody recognises the Murine CD34 cell surface antigen which is expressed by endothelial cells and by haematopoietic stem cells.
This antibody recognises a Neuraminidase sensitive epitope. As in the Human system, CD34 antibodies in the Mouse demonstrate slightly different staining patterns depending on their fine specificity.
Clone MEC14.7 appears to recognise a subset of the stem cell population recognised by

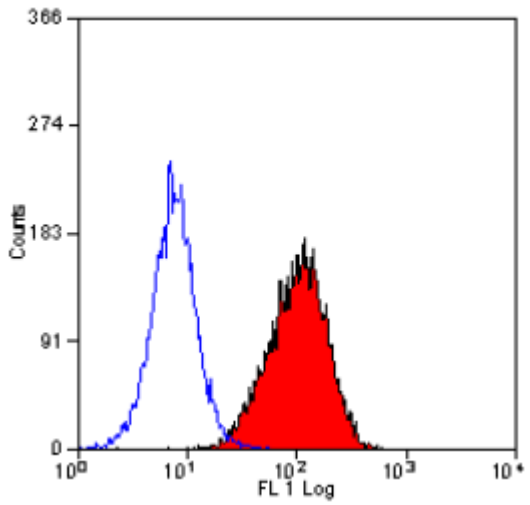
clone RAM34, and it is thought that this is due to differences in the epitope recognised by the two antibodies.

Species Reactivity: **Tested:** Mouse.

Storage: Prior to and following reconstitution store the antibody undiluted at 2-8°C.
DO NOT FREEZE!
This product is photosensitive and should be protected from light.
Shelf life: one year from despatch.

General References:
1. Garlanda, C. et al. (1997) Characterization of MEC14.7, a new monoclonal antibody recognising mouse CD34: a useful reagent for identifying and characterizing blood vessels and haematopoietic precursors. Eur. J. Cell Biol. 73: 368-377.
2. Winding, B. et al. (2002) Synthetic matrix metalloproteinase inhibitors inhibit growth of established breast cancer osteolytic lesions and prolong survival in mice. Clin. Cancer Res. 8: 1932-1939.
3. Morison, N.B. et al. (2007) The long-term actions of etonogestrel and levonorgestrel on decidualized and non-decidualized endometrium in a mouse model mimic some effects of progestogen-only contraceptives in women. Reproduction. 133: 309-21.
4. Chen, L. et al. (2010) Roles of tetrahydrobiopterin in promoting tumor angiogenesis. Am J Pathol. 177: 2671-80.
5. Ager, E.I. et al. (2010) Targeting the angiotensin II type 2 receptor (AT2R) in colorectal liver metastases. Cancer Cell Int. 10: 19
6. Chabot, S. et al. (2011) A novel antiangiogenic and vascular normalization therapy targeted against human CD160 receptor. J Exp Med. 208: 973-86.
7. Chen, J. et al. (2011) Circulating endothelial progenitor cells and cellular membrane microparticles in db/db diabetic mouse: possible implications in cerebral ischemic damage. Am J Physiol Endocrinol Metab. 2011 Jul;301(1):E62-71.

Pictures:



Staining of WEHI cells with Rat Anti-Mouse CD34 antibody -RPE conjugated.