

Monoclonal Antibody to CD34 - Purified

Alternate names:	Hematopoietic progenitor cell antigen CD34, Hematopoietic progenitor cell marker
Catalog No.:	SM1603P
Quantity:	0.25 mg
Concentration:	1.0 mg/ml
Background:	<p>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.</p> <p>CD34 is a cell surface antigen, which is expressed by endothelial cells and by haematopoietic stem cells.</p>
Uniprot ID:	Q64314
NCBI:	NP_598415.1
GeneID:	12490
Host / Isotype:	Rat / IgG2a
Clone:	MEC14.7
Format:	<p>State: Liquid purified IgG fraction. Purification: Affinity Chromatography on Protein G. Buffer System: PBS, pH 7.4 containing 0.09% Sodium Azide as preservative.</p>
Applications:	<p>Flow Cytometry: Use 10 µl of 1/25-1/50 diluted antibody to label 10e6 cells in 100 µl. Immunoprecipitation: 2-10 µg/ml. Clone MEC14.7 has been described for Immunohistochemistry on Frozen and Paraffin Sections (1/20-1/200). Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.</p>
Specificity:	<p>This antibody is specific for the CD34 cell surface antigen. It 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</p>

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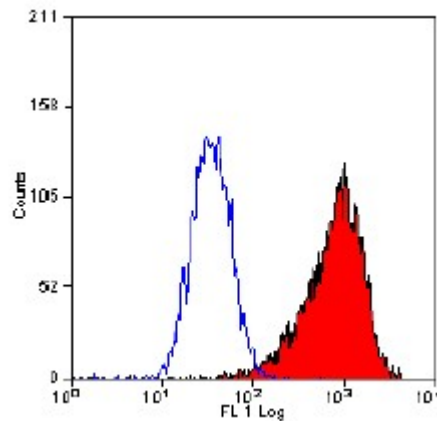
the two antibodies.

Species Reactivity: Tested: Mouse.

Storage: Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing. 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.

Pictures:



Staining of WEHI cells with Rat anti Mouse CD34 (SM1603P/PS/PT).

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