

Product datasheet for **BM4086**

Pecam1 Rat Monoclonal Antibody [Clone ID: ER-MP12]

Product data:

Product Type:	Primary Antibodies
Clone Name:	ER-MP12
Applications:	FC, IHC
Recommended Dilution:	Immunohistochemistry on Frozen Sections: 0.25-0.5 µg/ml (1/400-1/800). Immunohistochemistry on Paraffin Sections: 20 µg/ml (1/10). <i>Proteinase K pre-treatment</i> for antigen retrieval is recommended. Do not use standard 4% Formalin fixation, but max. 0.05% glutaraldehyde or 1% paraformaldehyde! Suggested Positive Control: Mouse spleen. Has been described to work in FACS .
Reactivity:	Mouse
Host:	Rat
Isotype:	IgG2a
Clonality:	Monoclonal
Immunogen:	Mouse macrophage precursor cells. The antigen is a glutaraldehyde (0.05%) and paraformaldehyde (1%) resistant 140 kD surface glycoprotein (reducing and non reducing conditions) identified as CD31. The antigen expression closely follows that of CD34.



[View online »](#)

Specificity:	<p>Monoclonal CD31 antibody (clone ER-MP12) recognizes PECAM-1, platelet/endothelial cell adhesion molecule 1.</p> <p>It is a general marker for the detection of a major population of haematopoietic stem cells and is useful for the accumulation of early murine macrophage precursors from bone marrow cell suspensions by FACS. An even more precise characterization of such isolated and concentrated precursor cells is achieved when ER-MP12 is combined with other markers like ER-MP20 (anti Ly-6C, <i>Cat.-No</i> BM4019) or ER-MP58 (<i>Cat.-No</i> BM4089).</p> <p>The ER-MP12 antigen is also expressed by endothelial cells.</p> <p>Antigen Distribution</p> <p>Isolated Cells: The antigen is found on the surface of approximately 40% of freshly isolated bone marrow cells of adult mice, on the majority of immortalized macrophage precursor cell lines (M1, RMB-1, RMB-3) corresponding to CFU-GM cells. The antibody detects pluri- and multipotent stem cells and prothymocytes as well as particular lymphoid cells in bone marrow and peripheral lymphoid organs.</p> <p>Tissue Sections: The antigen is detected within the lymphopoietic islands in the spleen of newborn (day 12) and in the bone marrow of adult mice. Capillary endothelial cells of adult mice also express the antigen.</p> <p>Detects a major population of Mouse colony forming unit macrophage (CFU-M) precursor cells, subpopulation of pre CFU-M and monoblasts, precursor cells of granulocytes.</p>
Formulation:	<p>PBS, pH 7.2</p> <p>State: Purified</p> <p>State: Lyophilized purified IgG fraction</p> <p>Stabilizer: 6 mg/ml BSA</p> <p>Preservative: 0.05% ProClin150</p>
Reconstitution Method:	Restore by adding 0.5 ml distilled water (= 0.2 mg/ml Stock Solution).
Concentration:	0.2 mg/ml (after reconstitution)
Purification:	Affinity Chromatography
Conjugation:	Unconjugated
Storage:	<p>Store lyophilized at 2-8°C for 6 months or at -20°C long term.</p> <p>After reconstitution store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C long term.</p> <p>Avoid repeated freezing and thawing.</p>
Stability:	Shelf life: one year from despatch.
Gene Name:	platelet/endothelial cell adhesion molecule 1
Database Link:	Entrez Gene 18613 Mouse Q08481

Background:

CD31, also known as platelet endothelial cell adhesion molecule 1 (PECAM1), is a type I integral membrane glycoprotein and a member of the immunoglobulin superfamily of cell surface receptors. It is constitutively expressed on the surface of endothelial cells, and concentrated at the junction between them. It is also weakly expressed on many peripheral lymphoid cells and platelets.

CD31 has been used to measure angiogenesis in association with tumor recurrence. Other studies have also indicated that CD31 and CD34 can be used as markers for myeloid progenitor cells and recognize different subsets of myeloid leukemia infiltrates (granular sarcomas).

Synonyms:

PECAM-1, EndoCAM, GPIIA'

Note: **This antibody was produced serum-free, without fetal calf serum.**

Protocol: **Protocol with Frozen, ice-cold Acetone-Fixed Sections:**

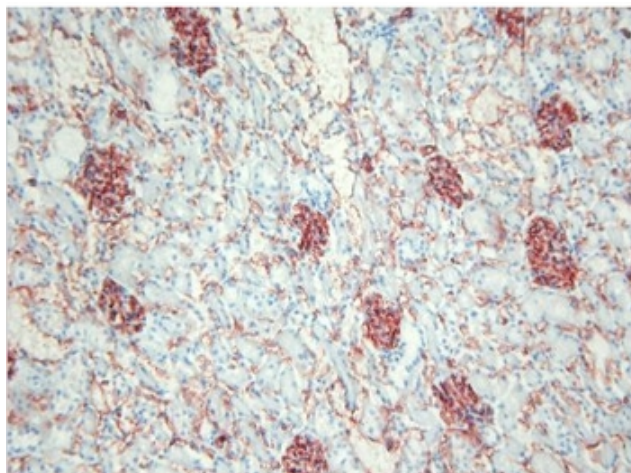
(The whole procedure is performed at room temperature)

1. Wash in PBS.
2. Block endogenous peroxidase.
3. Wash in PBS.
4. Block with 10% normal goat serum in PBS for 30min. in a humid chamber.
5. Incubate with primary antibody (dilution see datasheet) for 1h in a humid chamber.
6. Wash in PBS.
7. Incubate with secondary antibody (peroxidase-conjugated goat anti rat IgG (H+L) minimal-cross reaction to mouse) for 1h in a humid chamber.
8. Wash in PBS.
9. Incubate with AEC substrate (3-amino-9-ethylcarbazol) for 12min.
10. Wash in PBS.
11. Counterstain with Mayer's hemalum.

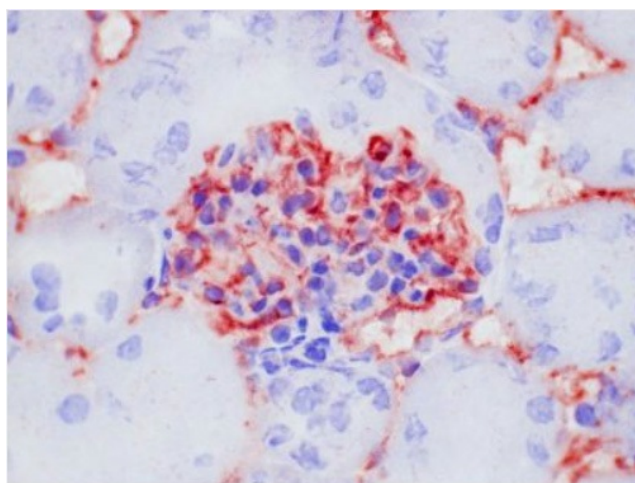
Protocol with Formalin-Fixed, Paraffin-Embedded Sections

(The whole procedure is performed at room temperature)

1. Deparaffinize and rehydrate tissue section.
2. Incubate the tissue section with proteinase K for 7min.
3. Wash in distilled water.
4. Block endogenous peroxidase.
5. Wash in PBS.
6. Block with 10% normal goat serum in PBS for 30min. in a humid chamber.
7. Incubate with primary antibody (dilution see datasheet) for 1h in a humid chamber.
8. Wash in PBS.
9. Incubate with secondary antibody (peroxidase-conjugated goat anti rat IgG (H+L) minimal-cross reaction to mouse) for 1h in a humid chamber.
10. Wash in PBS.
11. Incubate with AEC substrate (3-amino-9-ethylcarbazol) for 12min.
12. Wash in PBS.
13. Counterstain with Mayer's hemalum.

Product images:

Immunohistochemical staining on Mouse Kidney Frozen Sections using CD31 antibody clone ER-MP12 B.



Immunohistochemical staining on Mouse Kidney Frozen Sections using CD31 antibody clone ER-MP12 B.