Technical Data Sheet

PE Rat Anti-Mouse CD31

Product Information

Material Number: 553373
Alternate Name: EndoCAM; GPIIA; PECA1; PECAM1; Platelet endothelial cell adhesion molecule
Size: 0.2 mg
Concentration: 0.2 mg/ml
Clone: MEC 13.3
Immunogen: 129/Sv mouse-derived endothelioma cell line tEnd.1
Isotype: Rat (LEW) IgG2a, κ
Reactivity: QC Testing: Mouse
Storage Buffer: Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The MEC13.3 antibody specifically recognizes CD31, also known as PECAM-1 (Platelet Endothelial Cell Adhesion Molecule-1). CD31 is a 130 kDa integral membrane protein, a member of the immunoglobulin superfamily, that mediates cell-to-cell adhesion. CD31 is expressed constitutively on the surface of adult and embryonic endothelial cells and is also expressed on many peripheral leukocytes and platelets. It has also been detected on bone marrow-derived hematopoietic stem cells and embryonic stem cells. CD31 is involved in the transendothelial emigration of neutrophils, and neutrophil PECAM-1 appears to be down-regulated after extravasation into inflamed tissues. Multiple alternatively spliced isoforms are detected during early post-implantation embryonic development; this alternative splicing is involved in the regulation of ligand specificity. CD38 and vitronectin receptor (αvβ3 integrin, CD51/CD61) are proposed to be ligands for CD31. CD31-mediated endothelial cell-cell interactions are involved in angiogenesis. The MEC13.3 mAb inhibits a variety of in vitro and in vivo functions mediated by CD31.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.
The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

Application Notes

Application

Flow cytometry Routinely Tested

![Two-color flow cytometric analysis of CD31 expression on BALB/c mouse bone marrow cells. Bone marrow cells were stained with APC Rat Anti-Mouse CD45R/B220 antibody (Cat. No. 553092/561880) and either PE Rat IgG2a, κ Isotype Control (Cat. No.553930 ; Left Panel) or PE Rat Anti-Mouse CD31 antibody (Cat. No. 561073/553373; Right Panel). Two-color flow cytometric dot plots show the correlated expression patterns of CD31 (or Ig Isotype control staining) versus CD45R/B220 for gated events with the forward and side light-scatter characteristics of viable bone marrow cells.](image-url)
Suggested Companion Products

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<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
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<tr>
<td>553930</td>
<td>PE Rat IgG2a, κ Isotype Control</td>
<td>0.1 mg</td>
<td>R35-95</td>
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<td>Stain Buffer (FBS)</td>
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<td>MEC 13.3</td>
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<td>561880</td>
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Product Notices
1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.

References