**Product datasheet**

**Anti-CD34 antibody [MEC 14.7] ab8158**

★★★★☆ 30 Abreviews  168 References  9 Images

### Overview

**Product name**  Anti-CD34 antibody [MEC 14.7]

**Description**  Rat monoclonal [MEC 14.7] to CD34

**Host species**  Rat

**Specificity**  Recognizes mouse CD34.

**Tested applications**  Suitable for: ICC/IF, IHC-Fr, IP, IHC-P, WB, ELISA

**Species reactivity**  Reacts with: Mouse

**Immunogen**  Tissue, cells or virus corresponding to Mouse CD34. Specifically, the murine endothelioma cell line tEnd.

**Positive control**  IHC-P: Mouse lung and brain tissue. WB: Mouse lung membrane tissue lysate.

**General notes**  This antibody clone is manufactured by Abcam. If you require this antibody in a particular buffer formulation or a particular conjugate for your experiments, please contact orders@abcam.com or you can find further information here.

### Properties

**Form**  Liquid

**Storage instructions**  Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term.

**Storage buffer**  pH: 7.40
Preservative: 0.02% Sodium azide
Constituents: PBS, 6.97% L-Arginine

**Purity**  Immunogen affinity purified

**Clonality**  Monoclonal

**Clone number**  MEC 14.7

**Isotype**  IgG2a

**Light chain type**  kappa

### Applications
Possible adhesion molecule with a role in early hematopoiesis by mediating the attachment of stem cells to the bone marrow extracellular matrix or directly to stromal cells. 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. Presents carbohydrate ligands to selectins.

Selectively expressed on hematopoietic progenitor cells and the small vessel endothelium of a variety of tissues.

Belongs to the CD34 family.

On early hematopoietic progenitor cells.

Highly glycosylated.

Phosphorylated on serine residues by PKC.

Membrane.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICC/IF</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>IHC-Fr</td>
<td>⭐⭐⭐⭐</td>
<td>1/50.</td>
</tr>
<tr>
<td>IP</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>IHC-P</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use a concentration of 0.5 - 5 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. Staining with this method can be difficult, it has been reported to us that milder fixation methods for paraffin sections like using zinc solution work well (unfortunately we have no further detailed instructions of this fixation method).</td>
</tr>
<tr>
<td>WB</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use a concentration of 5 µg/ml. Detects a band of approximately 80 kDa (predicted molecular weight: 41 kDa).</td>
</tr>
<tr>
<td>ELISA</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
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</tbody>
</table>

Target Images

2
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD34 antibody [MEC 14.7] (ab8158)

IHC image of CD34 staining in a formalin fixed paraffin-embedded mouse lung tissue section, performed on a Leica Bond™ system using the standard protocol B. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab8158, 1 µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

Western blot - Anti-CD34 antibody [MEC 14.7] (ab8158)

Anti-CD34 antibody [MEC 14.7] (ab8158) at 1 µg/ml + Mouse Lung Membrane Tissue Lysate (ab171830) at 50 µg

Secondary

Goat Anti-Rat IgG H&L (HRP) (ab97057) at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 41 kDa
Observed band size: 80 kDa

why is the actual band size different from the predicted?

Exposure time: 2 minutes

The main band is as expected at 80 kDa since the target is heavily glycosylated and phosphorylated.
Human aortic valve: immunofluorescence labelling shows telocytes. Frozen sections were sliced into a thickness of 6 μM, and then were postfixed with 4% paraformaldehyde dissolved in 0.1 M phosphate buffer (pH = 7.4) for at least 15 min. After washed with phosphate buffer for three times, sections were immersed in 10% goat serum for 1 hr. After that, sections were incubated overnight at 4°C with rat monoclonal anti-CD34 (ab8158; Abcam, Cambridge, UK) and either rabbit monoclonal to Vimentin (ab92547; Abcam), rabbit monoclonal to PDGF Receptorβ (ab32570, 1:100; Abcam) or rabbit polyclonal anti-CKit (ab5506, 1:100; Abcam), both were with the dilution of 1:100 in phosphate buffer and permeabilized by 0.25% Triton X100 at the same time. On the second day, the sections were incubated to goat antirabbit labelled with rhodamine secondary antibodies and goat antirat labelled with FITC diluted 1:200 in phosphate buffer for 1 hr. The sections were stained with 4',6-diamidino-2-phenylindole (DAPI).

IHC image of CD34 staining in a formalin fixed paraffin embedded mouse brain tissue section, performed on a Leica Bond™ system using the standard protocol B. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab8158, 10 μg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.
Immunohistochemical analysis of murine lung tissue, staining CD34 with ab8158.

Tissue was fixed with paraformaldehyde and blocked with 5% serum for 1 hour at room temperature; antigen retrieval was by heat mediation in citrate buffer (pH 6). Samples were incubated with primary antibody (1/100 in diluent) for 16 hours at 4°C. An undiluted HRP-conjugated horse anti-rat polyclonal IgG was used as the secondary antibody.

ab8158 staining CD34 in mouse lung endothelial cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with formaldehyde and blocked with 1% BSA for 30 minutes at 4°C. Samples were incubated with primary antibody (1/100) for 16 hours at 4°C. An undiluted Alexa Fluor® 555-conjugated goat anti-rat IgG polyclonal was used as the secondary antibody.

ab8158 staining CD34 in mouse mammary gland tissue sections by Immunohistochemistry (IHC-P - paraffin-embedded sections). Tissue was fixed with methacarnoy and blocked with 4% BSA for 60 minutes; antigen retrieval was by heat mediation in a citrate buffer. Samples were incubated with primary antibody (1/100) for 16 hours. A undiluted HRP-conjugated goat anti-rat IgG polyclonal was used as the secondary antibody.
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections): Anti-CD34 antibody [MEC 14.7] (ab8158)

This image is courtesy of an anonymous Abreview submitted on 8 February 2006.

Photomicrograph demonstrates CD34 in red and collagen type IV (ab19808) in blue in normal, adult brain vessels. Tissue was perfusion-fixed and cut into 15µm slide-mounted cryostat sections (i.e., lightly fixed, but not paraffin embedded).

Immunocytochemistry/ Immunofluorescence: Anti-CD34 antibody [MEC 14.7] (ab8158)

Ab8158 at a dilution of 1/50 staining CD34 from mouse lung cells by Immunocytochemistry. The antibody was incubated with the sample for 1 hour and then detected using an Alexa-Fluor 488® goat anti-rat antibody. The staining for CD34 is shown in green. The samples were also stained for Smooth Muscle Actin (red stain).

This image is courtesy of an Abreview submitted on 8 February 2006.

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