Monoclonal Antibody To Mouse CD13
Marker For Aminopeptidase N Positive Cells

Monoclonal antibody ER-BMDM1 is a useful marker for the identification of aminopeptidase N positive macrophages, interdigitating cells and dendritic cells. It is also very suitable for in vitro monitoring of M-CSF stimulated bone marrow cell cultures, as the antigen is gradually expressed with macrophage development. Expression of the ER-BMDM1 antigen rises after the monocytic stage of differentiation: bone marrow cells and peripheral blood monocytes are ER-BMDM1 negative, whereas virtually all thioglycollate elicited peritoneal exudate macrophages bind the antibody. The CD designation is based on similarity in molecular and functional characteristics.

<table>
<thead>
<tr>
<th>Product Number:</th>
<th>T-2015 (Lot 03PO9302)</th>
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</thead>
<tbody>
<tr>
<td>Clone:</td>
<td>ER-BMDM1</td>
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<tr>
<td>Host species, isotype:</td>
<td>Rat IgG2a</td>
</tr>
<tr>
<td>Quantity:</td>
<td>100µg</td>
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<tr>
<td>Format:</td>
<td>Affinity purified, lyophilized</td>
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<td></td>
<td>Reconstitute by adding 0.5ml distilled water. This stock solution contains 0.2mg/ml IgG, phosphate buffered saline pH 7.2 (PBS), 10mg/ml bovine serum albumin (BSA) as a stabilizer and 0.01% thimerosal as a preservative.</td>
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<td>Stability:</td>
<td>Original vial: 1 year at 4° - 8°C</td>
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<td>Stock solution or aliquots thereof: 1 year at -20°C. Avoid repeated thawing and freezing.</td>
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<td>Applications:</td>
<td>Tested for immunohistochemistry (IHC); has been described to work in FACS.</td>
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<td>Approximate working dilution for IHC:</td>
<td>Frozen sections: 1µg/ml (1:200)</td>
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<td>Paraffin sections: 40µg/ml (1:5); pretreatment not necessary.</td>
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<td>Optimal dilutions should be determined by the end user.</td>
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<td>Suggested positive control: Mouse spleen.</td>
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<td>Please see <a href="http://www.bma.ch">www.bma.ch</a> for protocols and general information.</td>
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<td>Immunogen:</td>
<td>Cultured mouse monocytes, day 7</td>
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<td>Antigen, epitope:</td>
<td>The antigen is a 160kDa membrane associated protein which shows aminopeptidase N activity. It is homologous to the human CD13 marker.</td>
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</table>
**Antigen distribution:**  
**Isolated Cells:** The antigen is present on the majority of isolated dendritic cells of the spleen and lymph node. Over 80% of thioglycollate elicited peritoneal exudate macrophages also express the ER-BMDM1 related antigen. It is absent from freshly isolated bone marrow cells and blood cells.  
**Tissue Sections:** Lymphoid organs: macrophages surrounding small blood vessels, interdigitating cells, subpopulation of macrophages in the T-cell areas, capsular and medullary cord macrophages in lymph nodes. Non-lymphoid organs: subpopulation of macrophages (mainly in connective tissues) and dendrocytes, structures positive for aminopeptidase such as the brush border of the small intestine, bile canaliculi in the liver and tubuli and glomeruli in the kidney or type II pneumocytes in the lung. Kupffer cells are negative.

**Specificity:**  
**Mouse:** Mature macrophages.  
**Other species:** not tested.

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**Selected references**


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For in vitro research only. Caution: this product contains thimerosal, a poisonous and hazardous substance.

**T-2015**  
**ER-BMDM1**  
**21.3.2006**
Staining Procedure
For Frozen And Paraffin-Embedded Tissue Sections
With Product T-2015

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. 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

For further information and details see technical information