



Peninsula Laboratories, LLC

A Member of the Bachem Group

305 Old County Road, San Carlos, CA 94070

Tel: (800) 922-1516 • (650) 592-5392

Fax: (650) 595-4071

www.bachem.com

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.

Product Number:	T-2015
Clone:	ER-BMDM1
Host species, isotype:	Rat IgG2a
Quantity:	100µg
Format:	Affinity purified, lyophilized 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.
Stability:	Original vial: 1 year at 4° - 8°C Stock solution or aliquots thereof: 1 year at -20°C. Avoid repeated thawing and freezing.
Applications:	Tested for immunohistochemistry (IHC); has been described to work in FACS. Approximate working dilution for IHC: Frozen sections: 1µg/ml (1:200) Paraffin sections: 40µg/ml (1:5); pretreatment not necessary. Optimal dilutions should be determined by the end user. Suggested positive control: Mouse spleen.
Immunogen:	Cultured mouse monocytes, day 7
Antigen, epitope:	The antigen is a 160kDa membrane associated protein which shows aminopeptidase N activity. It is homologous to the human CD13 marker.



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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.

Selected references

Leenen, P.J.M. et al.: The monoclonal antibody ER-BMDM1 recognizes a macrophage and dendritic cell differentiation antigen with aminopeptidase activity. *Eur. J. Immunol.* **22**, 1567-72 (1992)

Allaerts, W. et al.: A population of interstitial cells in the anterior pituitary with a hematopoietic origin and a rapid turnover: a relationship with folliculo-stellate cells? *J. Neuroimmunology* **78**: 184-197 (1997)

Leenen, P.J.M. et al.: Heterogeneity of mouse spleen dendritic cells: in vivo phagocytic activity, expression of macrophage markers and subpopulation turnover. *J. Immunol.* **160**: 2166-73 (1998)

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