



## 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 Human MRP14 (S100A9) Calgranulin B - Marker For A Subpopulation Of Inflammatory Leukocytes

Monoclonal antibody S36.48 identifies the Ca<sup>2+</sup>-binding 14kD subunit of the inflammatory L-1 protein complex, also called S100A9 or Calgranulin B. It is useful for the characterization of circulating granulocytes or inflammatory infiltrates of the myelo-monocytic lineage which express MRP14 differently depending on the inflammatory status of the disease.

---

|                               |  |
|-------------------------------|--|
| <b>Product Number:</b>        | T-1026   |
| <b>Clone:</b>                 | S36.48   |
| <b>Host species, isotype:</b> | Mouse IgG1   |
| <b>Quantity:</b>              | 100µg  |
| <b>Format:</b>                | 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), 5mg/ml bovine serum albumin (BSA) as a stabilizer and 0.09% sodium azide as a preservative.   |
| <b>Stability:</b>             | Original vial: 1 year at 4° - 8°C<br>Stock solution or aliquots thereof: 1 year at -20°C. Avoid repeated thawing and freezing.   |
| <b>Applications:</b>          | Tested for immunohistochemistry (IHC) and ELISA; has been described to work in FACS and dot blots.<br><b>Approximate working dilution for IHC:</b><br>Frozen sections: 0.25µg/ml (1:800)<br>Paraffin sections: 1µg/ml (1:200); Proteinase K pretreatment for antigen retrieval is recommended.<br>Optimal dilutions should be determined by the end user.<br>Suggested positive control: Human tonsil. |
| <b>Immunogen:</b>             | Cultured human monocytes.  |
| <b>Antigen, epitope:</b>      | The antigen is MRP14, the epitope is suspected in the central region of the peptide.   |



# 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

## Antigen distribution:

**Isolated cells:** The antigen is found in granulocytes and monocytes. It is absent from all other blood cells. In cultured monocytes, maximum MRP14 expression is found after 3 - 4 days. Myeloid leukaemia cells have been found to be positive as well.

**Tissue sections:** MRP14 is found in a distinct subpopulation of inflammatory perivascular infiltrates of the myelo-monocytic lineage. Macrophages synthesise MRP14 increasingly during the early stages of inflammation. A high MRP14 (and low MRP8) expression by macrophages was reported in granulomatous diseases such as tuberculosis and sarcoidosis. In non-granulomatous chronic inflammatory diseases like chronic rheumatoid arthritis, MRP8 and MRP14 positive cells consist of different subpopulations. During early inflammation endothelial cells are also positive with MRP8/14 determined by antibody 27E10 (product T-1023).

## Specificity:

**Human:** MRP14, granulocytes, stimulated monocytes and macrophages.

**Other:** not tested.

---

## Selected references

Odink, K., et al.: Two calcium-binding proteins in infiltrate macrophages of rheumatoid arthritis. *Nature* **330**, 80 (1987).

Brandtzaeg, P et al.: Mac387 antibody and detection of formalin resistant myelomonocytic L1 protein. *J.Clin.Pathol.*: **41**, 963- (1988).

Zwadlo, G.,et al.: Two calcium-binding proteins associated with specific stages of myeloid cell differentiation are expressed by subsets of macrophages in inflammatory tissues. *Clin.Exp.Immunol.*: **72**, 510- (1988).

Murao, S. et al.: A Protein Containing the Cystic Fibrosis Antigen is an Inhibitor of Protein Kinases. *J. Biological Chem.*: **254**, (14) 8356 - 8360 (1989).

Mues, B., et al.: Phenotyping of macrophages with monoclonal antibodies in endomyocardial biopsies as a new approach to diagnosis of myocarditis. *Eur. Heart Journal*: **11**, 619- (1990).

Delabie, J., et al.: Differential expression of the calcium-binding proteins MRP8 and MRP14 in granulomatous conditions: an immunohistochemical study. *Clin.Exp.Immunol.*: **81**, 123- (1990).

Teigelkamp, S., et al.: Calcium dependent Complex Assembly of the Myeloid Differentiation Proteins MRP-8 and MRP-14. *J. Biological Chem.*: **266**, (20), 13462 - 13467, (1991).

Sorg, C.: *Macrophages in Inflammation*. Regensberg & Biermann. ISBN 3-924469-23-7: 23-35 (1988).

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