



**BMA BIOMEDICALS**

BMA BIOMEDICALS  
Rheinstrasse 28-32  
CH-4302 Augst (Switzerland)  
Phone: ++41 61 811 6222  
Fax: ++41 61 811 6006  
info@bma.ch  
www.bma.ch

---

**Biotinylated Monoclonal Antibody To Human MRP14  
S100A9, Calgranulin B - Marker for 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.

*This antibody was produced serum-free, without fetal calf serum.*

---

**Product number: T-1027**

**Clone: S36.48**

**Lot: 07PB1713**

**TECHNICAL AND ANALYTICAL CHARACTERISTICS:**

**Host species, isotype:** Mouse IgG1

**Quantity:** 100µg

**Format:** Affinity purified from cell culture supernatant, biotinylated, 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 0.05% (v/v) Kathon CG 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:** Each lot of this antibody has been tested and validated for immunohistochemistry (IHC) and ELISA; has also been described to work in FACS and dot blots.  
**Approximate working dilution for IHC:**  
Frozen sections: 1µg/ml (1:200)  
Paraffin sections: 2µg/ml (1:100); Proteinase K pretreatment for antigen retrieval is recommended.  
Optimal dilutions should be determined by the end user.  
Suggested positive control: Human tonsil.  
Please see [www.bma.ch](http://www.bma.ch) for protocols and general information.

**Immunogen:** Cultured human monocytes.

**Antigen, epitope:** The antigen is MRP14, the epitope is suspected in the central region of the peptide.

<b>Antigen distribution:</b>	<b>Isolated cells:</b> 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 leukaemic cells have been found to be positive as well.
<b>Tissue sections:</b>	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 sarcoidis. 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).
<b>Specificity:</b>	<b>Human:</b> MRP14, granulocytes, stimulated monocytes and macrophages. <b>Other:</b> The antibody reacts with bovine spleen. It does not react with swine tissues.

---

### 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 use only. This product contains Kathon CG as a preservative.