



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

Biotinylated Monoclonal Antibody To Human MRP8/14 S100A8/A9, Calprotectin, L1 Protein - Acute Inflammation Marker

Monoclonal antibody 27E10 is unique in that it recognizes an epitope on the MRP8/14 heterocomplex that is not exposed on the individual subunits MRP8 or MRP14. It is ideally suited for the detection of early inflammatory macrophages and thus for the classification of acute stage inflammation in tissue sections and in smears, the characterization of tumorous tissues and the *in vitro* monitoring of peripheral blood cell cultures. The corresponding MRP8/14 ELISA (product S-1011) has shown great advantages in the early assessment of certain acute inflammatory conditions.

Product Number:	T-1024
Clone:	27E10
Host species, isotype:	Mouse IgG1
Quantity:	100µg
Format:	Affinity purified, biotinylated, 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) and ELISA; has been described to work in FACS and dot blots. Approximate working dilution for IHC: Frozen sections: 0.5µg/ml (1:400) 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.
Immunogen:	Cultured human monocytes.
Antigen, epitope:	The antigen is MRP8/14 (calprotectin), the epitope involves parts of both subunits MRP8 and MRP14.



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: Monocytes carry the antigen both on the surface and intracellularly, granulocytes exhibit it only intracellularly. Up to 80% of monocytes in early cultures (24-48h) are positive. No reaction has been seen with lymphocytes or platelets.

Tissue sections: The antigen is found in macrophages in the red pulp of the spleen and liver. It is strongly expressed in macrophages from acute inflamed tissues (peridontitis, contact eczema, urticaria, erythrodermia) where some endothelial and epidermal cells may also express this antigen. It is normally absent on resident mononuclear phagocytes in healthy tissues (skin, gut, thymus).

Specificity:

Human: subpopulation of macrophages, monocytes and granulocytes; peripheral blood monocytes carry the antigen extra- and intracellularly, neutrophils only intracellularly.

Other: subpopulation of macrophages of rhesus monkey.

Selected references

- Zwadlo, G. et al.: A monoclonal antibody to a subset of human monocytes found only in the peripheral blood and inflammatory tissues. *J. Immunol.* 137: 512-518 (1986)
- Broecker, E.B. et al.: Inflammatory cell infiltrates in human melanoma at different stages of tumor progression. *Int. Cancer* 41, 562 -567 (1988).
- Fruhbeis, B. et al.: Immunolocalization of an angiogenic factor (HAF) in normal inflammatory and tumor tissues. *Int. J. Canc.* 42, 207 - 212 (1988).
- Ringler, D.J. et al.: Immunophenotypic characterization of mononuclear phagocytes and dendritic cells in lymphoid organs of the rhesus monkey. *Clin. Immunopathol.* 49, 349 - 364 (1988).
- Roessner, A. et al.: Identification of macrophages and smooth muscle cells with monoclonal antibodies in the human atherosclerotic plaque. *Virch. Arch. A*, 412, 169 - 174 (1987).
- Steinhoff, G. et al.: Patterns of macrophage immigration and differentiation in human liver grafts. *Transplant. Proc.* 21(1), 398 - 400 (1989).
- Bhardwaj, R.S. et al.: The Calcium-binding proteins MRP8 and MRP14 form a membrane associated heterodimer in a subset of monocytes/macrophages present in acute but absent in chronic inflammatory lesions. *Eur. J. Immunol.* 22, 1891 - 1897 (1992).
- Burkhardt, K. et al.: MRP8/14 positive macrophages as early acute cellular rejection markers, and soluble MRP8/14 and increased expression of adhesion molecules following renal allograft transplantation. *Transpl. Proceed.* 27: 890-91 (1995)
- Johne, B. et al.: Functional and clinical aspects of the myelomonocyte protein calprotectin. *J. Clin Pathol.* 50: 113-123 (1997)
- Kiefer, R. et al.: Macrophage differentiation antigens in acute and chronic autoimmune polyneuropathies. *Brain* 121: 469-79 (1998)

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