
Monoclonal Antibody To Human CD163

Haemoglobin-Haptoglobin Receptor, Scavenger Receptor

Monoclonal antibody RM 3/1 recognizes a membrane glycoprotein on human monocytes and macrophages which is expressed in intermediate and late inflammatory stages. CD163 is a scavenger receptor for the haemoglobin-haptoglobin complex, and is upregulated by glucocorticoids and IL-10. The extracellular portion of the receptor is regularly shed and can be found in the circulation (see also our product S-1015, sCD163 ELISA). An important function of CD163 seems to be in the adhesion of monocytes to activated endothelial cells. CD163-positive cells include skin histiocytes, Kupffer cells, spleen macrophages of the red pulp, and some thymus macrophages. The antigen is also found abundantly in human term placenta, and regularly in acute and chronic inflammatory lesions.

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

Product number: T-1013

Clone: RM 3/1

Lot: 08PO1424

TECHNICAL AND ANALYTICAL CHARACTERISTICS:

Host species, isotype: Mouse IgG1

Quantity: 200µg

Format: Affinity purified from cell culture supernatant, lyophilized. Reconstitute by adding 0.5ml distilled water. This stock solution contains 0.4mg/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 for immunohistochemistry (IHC); has also been described to work in FACS and western blots.

Approximate working dilution for IHC:

Frozen sections: 4µg/ml (1:100)

Paraffin sections: does not react on routinely processed paraffin sections.

Optimal dilutions should be determined by the end user.

Suggested positive control: Human placenta.

Please see www.bma.ch for protocols and general information.

Immunogen: Human monocytes.

Antigen, epitope: The antigen is CD163, the epitope has not been further characterized.

Antigen distribution:

Isolated cells: Monocytes, particularly after dexamethasone treatment or after 2-5 days in culture. Does not react with lymphocytes, granulocytes or platelets.

Tissue sections: Positive staining can be observed in the skin (histiocytes), gut, Kupffer cells, few alveolar macrophages, a major population of macrophages in the placenta, varying degrees of macrophages in inflamed tissues, including tumorous tissue depending on the inflammatory stage. Red pulp, but not white pulp macrophages of the spleen, and cortical macrophages of the thymus are detected.

Macrophages in the synovialis of patients with rheumatoid arthritis. In alveolar macrophages and in Kupffer cells a double staining can be observed with monoclonal antibody 25F9 (product T-1016) which is not the case in other tissues.

Specificity:

Human: monocytes and macrophages.

Other: positive in monkey; negative in pig, rabbit and guinea pig.

Selected references

Zwadlo, G. et al.: A monoclonal antibody to a novel differentiation antigen on human macrophages associated with the down-regulatory phase of the inflammatory process. *Exp. Cell Biol* **55**: 295-304 (1987)

Zwadlo-Klarwasser, G. et al.: Glucocorticoid-induced appearance of the macrophage subtype RM 3/1 in peripheral blood of man. *Int Arch Allergy Appl. Immunol* **91**: 175-180 (1990)

Högger, P. et al.: *J. Immunology* **161**: 1883-1890 (1998).

For *in vitro* research only. This product contains Kathon CG as a preservative.