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BM4041 Monoclonal Antibody to CD163 - Purified

Alternate names: Hemoglobin scavenger receptor, M130, Macrophage marker, Scavenger receptor cysteine-rich type 1 protein M130

Quantity: 0.1 mg

Concentration: 0.2 mg/ml (after reconstitution)

Background: 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. 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.

Uniprot ID: Q86VB7

NCBI: NP_004235.3

GeneID: 9332

Host / Isotype: Mouse / IgG1

Recommended Isotype Controls: SM10P (for use in human samples), AM03095PU-N

Clone: 5C6-FAT

Immunogen: Human CD163.
The epitope has not been further characterized.

Format: **State:** Lyophilized purified IgG fraction
Purification: Affinity Chromatography
Buffer System: Stock Solution contains PBS, pH 7.2 with 5 mg/ml BSA as a stabilizer and 0.05% Kathon as a preservative.
Reconstitution: Restore with 0.5 ml distilled water.

Applications: **ELISA.**
Immunohistochemistry on Frozen Sections: 0.5 µg/ml (1/400)
Immunohistochemistry on Paraffin Sections: 1 µg/ml (1/200) (Proteinase K pretreatment for antigen retrieval is recommended).
Suggested Positive Control: Human placenta.
Has been described to work in **FACS** and **Western blots**.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: Monoclonal antibody 5C6 FAT recognizes a membrane glycoprotein on monocytes and macrophages which is expressed in intermediate and late inflammatory stages.
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 BM4022) which is not the case in other tissues.

Species Reactivity:

Tested: Human.
Expected from sequence similarity: Negative in Pig.

Storage:

Store lyophilized at 2-8°C for 6 months or at -20°C long term.
After reconstitution store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C long term.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

Product Citations:

Purchased from Acris:

1. Zaba LC, Cardinale I, Gilleaudeau P, Sullivan-Whalen M, Suárez-Fariñas M, Suárez Fariñas M, et al. Amelioration of epidermal hyperplasia by TNF inhibition is associated with reduced Th17 responses. J Exp Med. 2007 Dec 24;204(13):3183-94. Epub 2007 Nov 26. PubMed PMID: 18039949.
2. Hanako Ohmatsu, Daniel Humme, Juana Gonzalez, Nicholas Gulati, Markus Möbs, Wolfram Sterry, and James G. Krueger. IL-32 induces indoleamine 2,3-dioxygenase+CD1c+ dendritic cells and indoleamine 2,3-dioxygenase+CD163+ macrophages: relevance to Mycosis Fungoides progression. OncoImmunolog 2016.. http://dx.doi.org/10.1080/2162402X.2016.1181237.

General Readings:

1. Högger P, Dreier J, Droste A, Buck F, Sorg C. Identification of the integral membrane protein RM3/1 on human monocytes as a glucocorticoid-inducible member of the scavenger receptor cysteine-rich family (CD163). J Immunol. 1998 Aug 15;161(4):1883-90. PubMed PMID: 9712057.

Protocols:

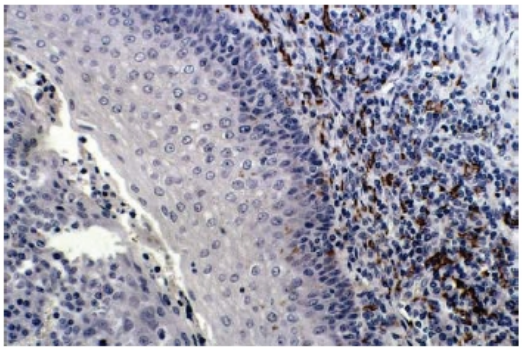
Protocol with frozen, ice-cold acetone-fixed sections:
The whole procedure is performed at room temperature
1. Wash in PBS
2. Block endogenous peroxidase
3. Wash in PBS
4. Block with 10% normal goat serum in PBS for 30min. in a humid chamber
5. Incubate with primary antibody (dilution see datasheet) for 1h in a humid chamber
6. Wash in PBS
7. Incubate with secondary antibody (peroxidase-conjugated goat anti mouse IgG+IgM (H+L) minimal-cross reaction to human) for 1h in a humid chamber
8. Wash in PBS
9. Incubate with AEC substrate (3-amino-9-ethylcarbazol) for 12min.
10. Wash in PBS 11. Counterstain with Mayer's hemalum.

Protocol with formalin-fixed, paraffin-embedded sections:
The whole procedure is performed at room temperature
1. Deparaffinize and rehydrate tissue section

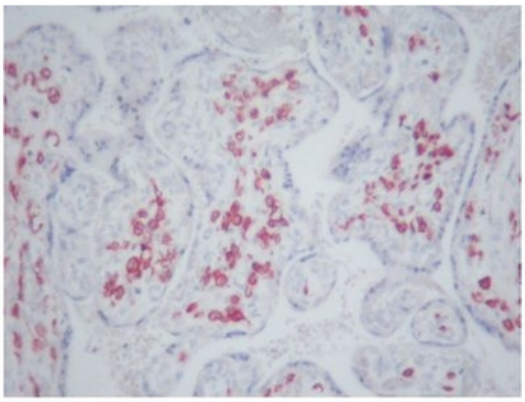
2. Incubate the tissue section with proteinase K for 7min.
3. Wash in distilled water
4. Block endogenous peroxidase
5. Wash in PBS
6. Block with 10% normal goat serum in PBS for 30min. in a humid chamber
7. Incubate with primary antibody (dilution see datasheet) for 1h in a humid chamber
8. Wash in PBS
9. Incubate with secondary antibody (peroxidase-conjugated goat anti mouse IgG+IgM (H+L) minimal-cross reaction to human) for 1h in a humid chamber
10. Wash in PBS
11. Incubate with AEC substrate (3-amino-9-ethylcarbazol) for 12min.
12. Wash in PBS
13. Counterstain with Mayer's hemalum

Pictures:

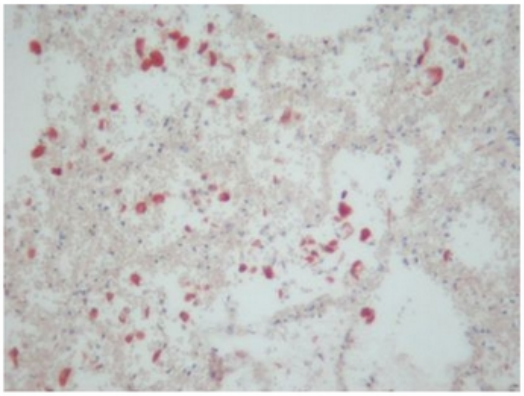
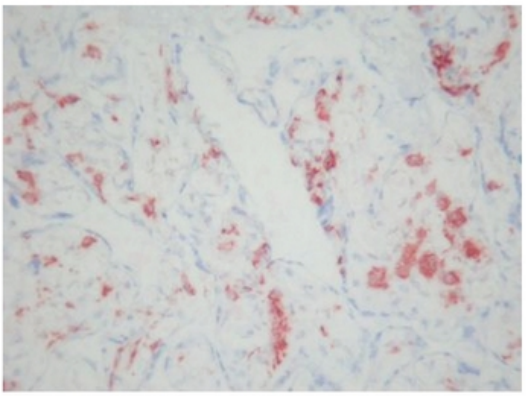
BM4041 CD163 antibody staining of Paraffin Human Tonsil Section (Clone 5C6-FAT)



BM4041 CD163 antibody staining of Paraffin Human Placenta Section (Clone 5C6-FAT)



BM4041 CD163 antibody staining of Paraffin Human Lung Section (Clone 5C6-FAT)



BM4041 CD163 antibody staining of Frozen Human Placenta Section (Clone 5C6-FAT)