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CD68 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1920a

Product Information

Application	WB, IHC, FC, ICC, E
Primary Accession	P34810
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	3F7D3
Isotype	IgG1
Calculated MW	37408
Description	This gene encodes a 110-kD transmembrane glycoprotein that is highly expressed by human monocytes and tissue macrophages. It is a member of the lysosomal/endosomal-associated membrane glycoprotein (LAMP) family. The protein primarily localizes to lysosomes and endosomes with a smaller fraction circulating to the cell surface. It is a type I integral membrane protein with a heavily glycosylated extracellular domain and binds to tissue- and organ-specific lectins or selectins. The protein is also a member of the scavenger receptor family. Scavenger receptors typically function to clear cellular debris, promote phagocytosis, and mediate the recruitment and activation of macrophages. Alternative splicing results in multiple transcripts encoding different isoforms.
Immunogen	Purified recombinant fragment of human CD68 (AA: 42-155) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide.

Additional Information

Gene ID	968
Other Names	Macrosialin, Gp110, CD68, CD68
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 ICC~~N/A E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CD68 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CD68
Function	Could play a role in phagocytic activities of tissue macrophages, both in intracellular lysosomal metabolism and extracellular cell-cell and cell-pathogen interactions. Binds to tissue- and organ-specific lectins or selectins, allowing homing of macrophage subsets to particular sites. Rapid recirculation of CD68 from endosomes and lysosomes to the plasma membrane may allow macrophages to crawl over selectin-bearing substrates or other cells.
Cellular Location	[Isoform Short]: Cell membrane; Single-pass type I membrane protein
Tissue Location	Highly expressed by blood monocytes and tissue macrophages. Also expressed in lymphocytes, fibroblasts and endothelial cells. Expressed in many tumor cell lines which could allow them to attach to selectins on vascular endothelium, facilitating their dissemination to secondary sites.

Background

The protein encoded by this gene belongs to the inhibitor of DNA binding family, members of which are transcriptional regulators that contain a helix-loop-helix (HLH) domain but not a basic domain. Members of the inhibitor of DNA binding family inhibit the functions of basic helix-loop-helix transcription factors in a dominant-negative manner by suppressing their heterodimerization partners through the HLH domains. This protein may play a role in negatively regulating cell differentiation. A pseudogene of this gene is located on chromosome 3. ; ; ;

References

1. Rom J Morphol Embryol. 2012;53(1):61-6. 2. Anticancer Res. 2009 Aug;29(8):3269-79.

Images

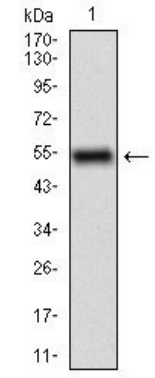


Figure 1: Western blot analysis using CD68 mAb against human CD68 (AA: 42-155) recombinant protein. (Expected MW is 37.4 kDa)

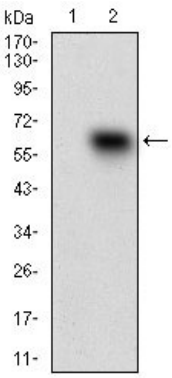


Figure 2: Western blot analysis using CD68 mAb against HEK293 (1) and CD68 (AA: 42-155)-hIgGFc transfected HEK293 (2) cell lysate.

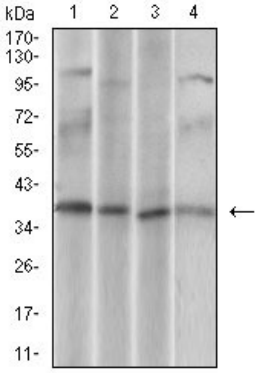


Figure 3: Western blot analysis using CD68 mouse mAb against U937 (1), Hela (2), HepG2 (3), Jurkat (4) cell lysate.

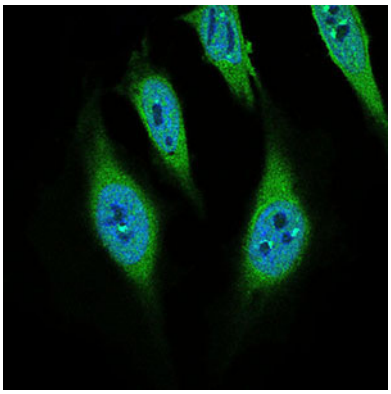


Figure 4: Immunofluorescence analysis of Hela cells using CD68 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye.

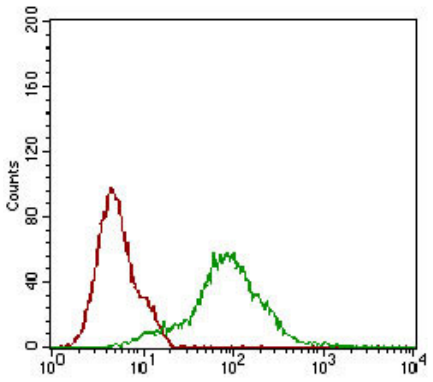


Figure 5: Flow cytometric analysis of Hela cells using CD68 mouse mAb (green) and negative control (red).

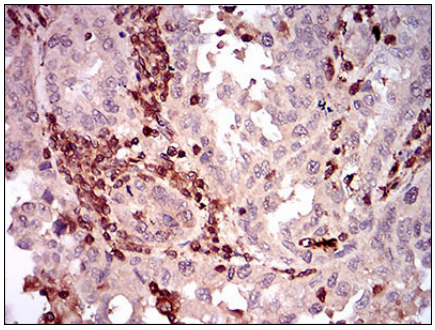


Figure 6: Immunohistochemical analysis of paraffin-embedded endometrial cancer tissues using CD68 mouse mAb with DAB staining.

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