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CD14 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1020a

Product Information

Application	IHC, FC, E
Primary Accession	P08571
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	5A3
Isotype	IgG1
Calculated MW	40076
Description	CD14 antigen is a GPI-linked glycoprotein with a molecular weight of 55kD. The CD14 antigen is expressed on cells of the myelomonocytic lineage including monocytes, macrophages and Langerhans cells. Low expression is observed on neutrophils and on human B cells. CD14 antigen is a receptor for bacterial lipopolysaccharide (LPS, endotoxin) and the lipopolysaccharide binding protein (LBP). LBP and CD14 antigen serves two physiological roles. These proteins act as opsonin and opsonic receptor, respectively, to promote the phagocytic uptake of bacteria or LPScoated particles by macrophages.
Immunogen	Purified recombinant fragment of human CD14 expressed in E. Coli.
Formulation	Purified antibody in PBS containing 0.03% sodium azide.

Additional Information

Gene ID	929
Other Names	Monocyte differentiation antigen CD14, Myeloid cell-specific leucine-rich glycoprotein, CD14, Monocyte differentiation antigen CD14, urinary form, Monocyte differentiation antigen CD14, membrane-bound form, CD14
Dilution	IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 E~~N/A
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	CD14 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CD14

Function	Coreceptor for bacterial lipopolysaccharide (PubMed: 1698311, PubMed:23264655). In concert with LBP, binds to monomeric lipopolysaccharide and delivers it to the LY96/TLR4 complex, thereby mediating the innate immune response to bacterial lipopolysaccharide (LPS) (PubMed:20133493, PubMed:22265692, PubMed:23264655). Acts via MyD88, TIRAP and TRAF6, leading to NF-kappa-B activation, cytokine secretion and the inflammatory response (PubMed:8612135). Acts as a coreceptor for TLR2:TLR6 heterodimer in response to diacylated lipopeptides and for TLR2:TLR1 heterodimer in response to triacylated lipopeptides, these clusters trigger signaling from the cell surface and subsequently are targeted to the Golgi in a lipid-raft dependent pathway (PubMed:16880211). Binds electronegative LDL (LDL(-)) and mediates the cytokine release induced by LDL(-) (PubMed:23880187).
Cellular Location	Cell membrane; Lipid-anchor, GPI-anchor. Secreted. Membrane raft. Golgi apparatus. Note=Secreted forms may arise by cleavage of the GPI anchor.
Tissue Location	Detected on macrophages (at protein level) (PubMed:1698311). Expressed strongly on the surface of monocytes and weakly on the surface of granulocytes; also expressed by most tissue macrophages.

References

1. J Mammary Gland Biol Neoplasia 2000, 5 : 227-241. 2. J Mammary Gland Biol Neoplasia 2000, 5 : 165-185.

Images

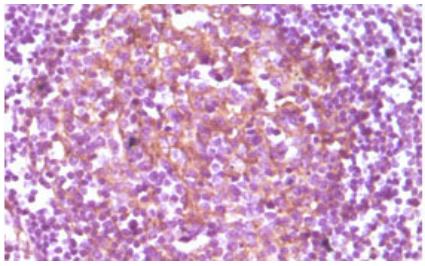

Figure 1: Immunohistochemical analysis of paraffin-embedded human lymphnode, showing membrane localization using CD14 mouse mAb with DAB staining.

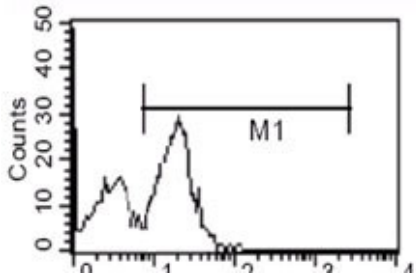

Figure 2: Flow cytometric analysis of human PBMC using CD14 mouse mAb.