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CD14 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1891a

Product Information

Application	WB, IHC, FC, E
Primary Accession	P08571
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Clone Names	4B4F12
Isotype	IgG1
Calculated MW	40076
Description	The protein encoded by this gene is a surface antigen that is preferentially expressed on monocytes/macrophages. It cooperates with other proteins to mediate the innate immune response to bacterial lipopolysaccharide. Alternative splicing results in multiple transcript variants encoding the same protein.
Immunogen	Purified recombinant fragment of human CD14 (AA: 20-214) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% 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	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 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	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.

Background

The protein encoded by this gene is the receptor for colony stimulating factor 1, a cytokine which controls the production, differentiation, and function of macrophages. This receptor mediates most if not all of the biological effects of this cytokine. Ligand binding activates the receptor kinase through a process of oligomerization and transphosphorylation. The encoded protein is a tyrosine kinase transmembrane receptor and member of the CSF1/PDGF receptor family of tyrosine-protein kinases. Mutations in this gene have been associated with a predisposition to myeloid malignancy. The first intron of this gene contains a transcriptionally inactive ribosomal protein L7 processed pseudogene oriented in the opposite direction. ; ; ; ;

References

1. J Immunol. 2012 Dec 15;189(12):5729-44. 2. Iran J Immunol. 2011 Jun;8(2):111-9.

Images

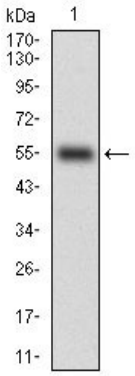
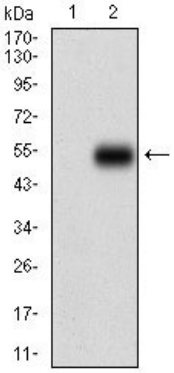


Figure 1: Western blot analysis using CD14 mAb against human CD14 (AA: 20-214) recombinant protein. (Expected MW is 46.8 kDa)

Figure 2: Western blot analysis using CD14 mAb against HEK293 (1) and CD14 (AA: 20-214)-hIgGFc transfected HEK293 (2) cell lysate.



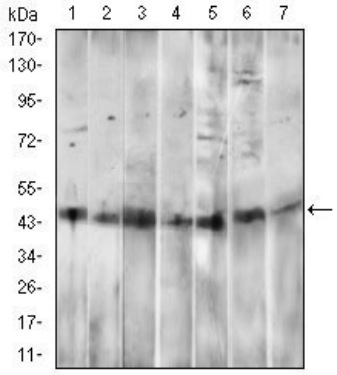


Figure 3: Western blot analysis using CD14 mouse mAb against HepG2 (1), A549 (2), HL60 (3), RAW264.7 (4), Hela (5), HEK293 (6) and NIH/3T3 (7) cell lysate.

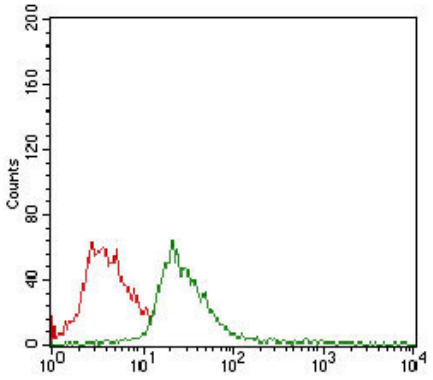


Figure 4: Flow cytometric analysis of Jurkat cells using CD14 mouse mAb (green) and negative control (red).

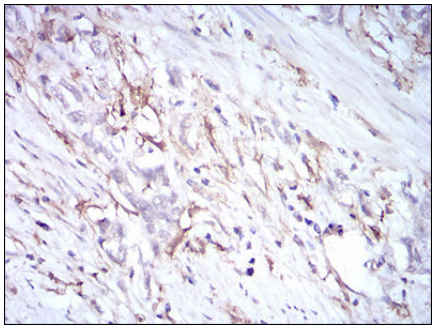


Figure 6: Immunohistochemical analysis of paraffin-embedded stomach cancer tissues using CD14 mouse mAb with DAB staining.