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CD14 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1886a

Specification

CD14 Antibody - Product Information

Application	**E, WB, IF, IHC**
Primary Accession	P08571
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG2a**
Calculated MW	**40kDa KDa**

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

CD14 Antibody - 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
E~~1/10000
WB~~1/500 - 1/2000
IF~~1/200 - 1/1000
IHC~~1/200 - 1/1000

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.

CD14 Antibody - 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:23264655, PubMed:22265692). 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.

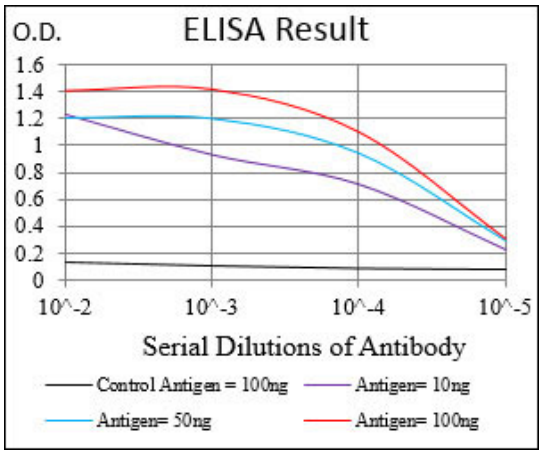
Tissue Location
Detected on macrophages (at protein level) (PubMed:1698311). Expressed strongly on the surface of monocytes and weakly on the surface of granulocytes; also expressed by most tissue macrophages.

CD14 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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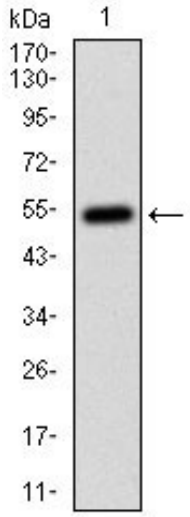


Figure 1: Western blot analysis using CD14 mAb against human CD14 (AA: 20-214) recombinant protein. (Expected MW is 46.8 kDa)

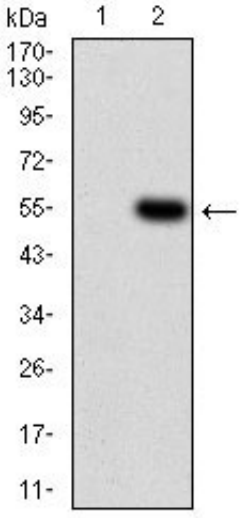


Figure 2: Western blot analysis using CD14 mAb against HEK293 (1) and CD14 (AA: 20-214)-hIgGFc transfected HEK293 (2) cell lysate.

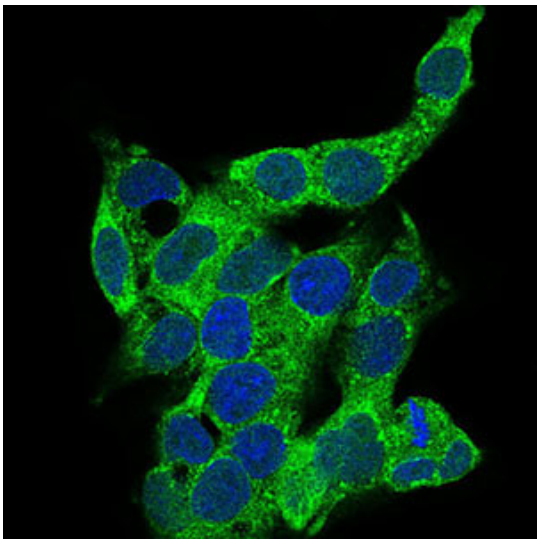


Figure 3: Immunofluorescence analysis of HepG2 cells using CD14 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Secondary antibody from Fisher (Cat#: 35503)

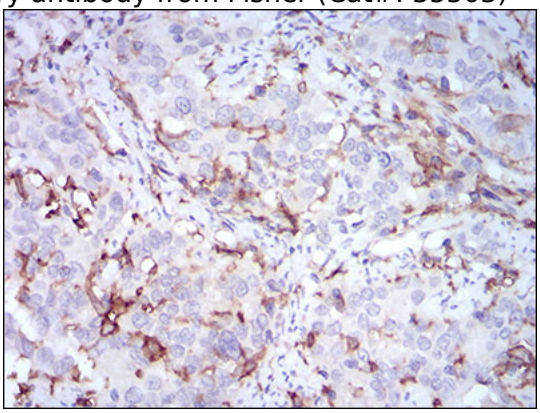


Figure 4: Immunohistochemical analysis of paraffin-embedded cervical cancer tissues using CD14 mouse mAb with DAB staining.

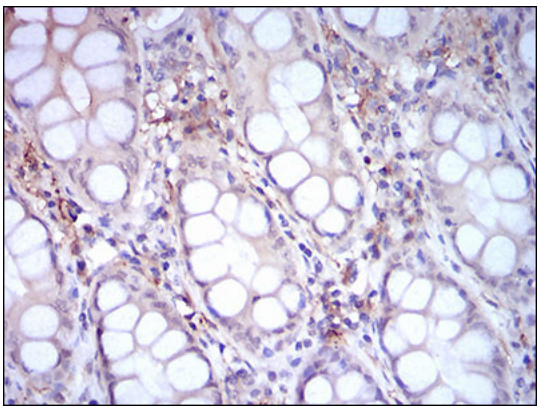


Figure 5: Immunohistochemical analysis of paraffin-embedded colon tissues using CD14 mouse mAb with DAB staining.

CD14 Antibody - Background

The membrane-associated protein encoded by this gene is a member of the superfamily of ATP-binding cassette (ABC) transporters. ABC proteins transport various molecules across extra- and intra-cellular membranes. ABC genes are divided into seven distinct subfamilies (ABC1, MDR/TAP, MRP, ALD, OABP, GCN20, White). This protein is a member of the MDR/TAP subfamily. Members of the MDR/TAP subfamily are involved in multidrug resistance. The protein encoded by this gene is an

ATP-dependent drug efflux pump for xenobiotic compounds with broad substrate specificity. It is responsible for decreased drug accumulation in multidrug-resistant cells and often mediates the development of resistance to anticancer drugs. This protein also functions as a transporter in the blood-brain barrier. ;

CD14 Antibody - References

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