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CD14 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6294A

Product Information

Application	IHC-P, WB, FC, IF, IHC-P-Leica, E
Primary Accession	P08571
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB14105
Calculated MW	40076
Antigen Region	54-83

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
Target/Specificity	This CD14 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 54-83 amino acids from the N-terminal region of human CD14.
Dilution	IHC-P~~1:100 WB~~1:1000 FC~~1:25 IF~~1:25 IHC-P-Leica~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CD14 Antibody (N-term) 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.

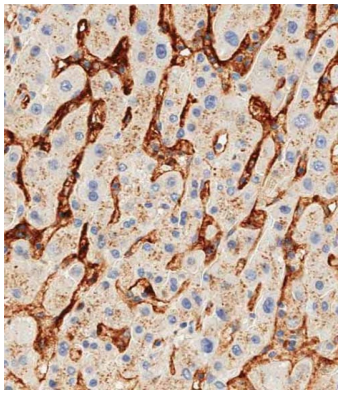
Background

CD14 is a surface protein preferentially expressed on monocytes/macrophages. It binds lipopolysaccharide binding protein and recently has been shown to bind apoptotic cells.

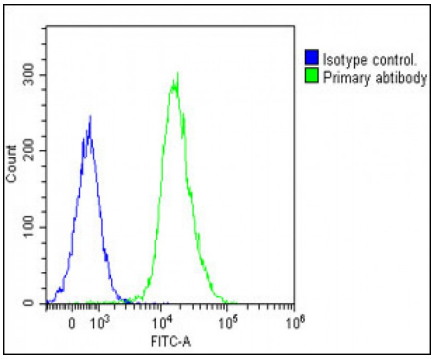
References

Donati,M., J. Periodontol. 79 (3), 517-524 (2008)
Yuan,F.F., Immunol. Cell Biol. 86 (3), 268-270 (2008)
Setoguchi,M., Biochim. Biophys. Acta 1008 (2), 213-222 (1989)
Goyert,S.M., Science 239 (4839), 497-500 (1988)

Images

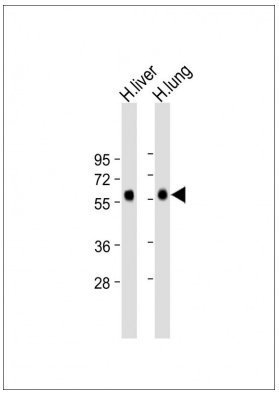


Immunohistochemical analysis of paraffin-embedded human liver tissue using AP6294A performed on the Leica® BOND RXm. Tissue was fixed with formaldehyde at room temperature; antigen retrieval was by heat mediation with a EDTA buffer (pH9. 0). Samples were incubated with primary antibody(1:1000) for 1 hours at room temperature. A undiluted biotinylated CRF Anti-Polyvalent HRP Polymer antibody was used as the secondary antibody.

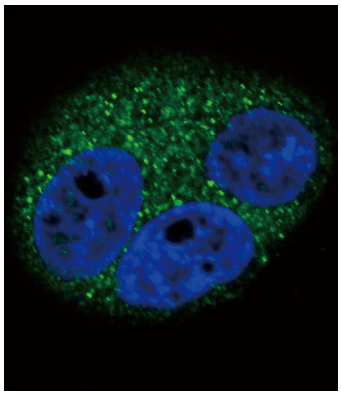


Overlay histogram showing Jurkat cells stained with AP6294A(green line). The cells were fixed with 2% paraformaldehyde and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (1:25 dilution) for 60 min at 37°C. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed at 1/200 dilution for 40 min at Room temperature. Isotype control antibody (blue line)

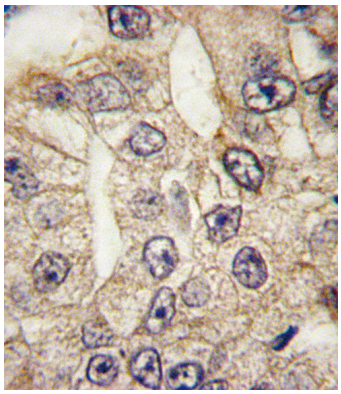
was rabbit IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.



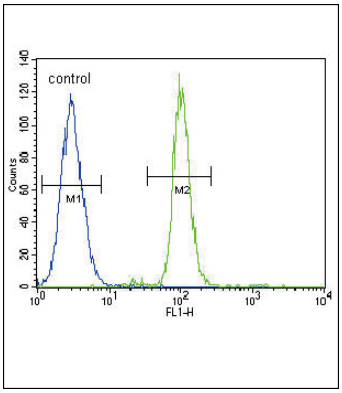
All lanes : Anti-CD14 Antibody (N-term) at 1:2000 dilution Lane 1: Human liver lysate Lane 2: Human lung lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 40 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Confocal immunofluorescent analysis of CD14 Antibody (N-term)(Cat#AP6294a) with A549 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green).DAPI was used to stain the cell nuclear (blue).



Formalin-fixed and paraffin-embedded human lung carcinoma tissue reacted with CD14 antibody (N-term) (Cat.#AP6294a), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



CD14 Antibody (N-term) (Cat. #AP6294a) flow cytometric analysis of A549 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Citations

- Endothelialization of arterial vascular grafts by circulating monocytes
- Enhanced autophagy promotes the clearance of in diabetic rats with wounds
- Negative regulation of Toll-like receptor-4 signaling through the binding of glycosylphosphatidylinositol-anchored

glycoprotein, CD14, with the sialic acid-binding lectin, CD33.
- Tandem Repeat Effector Targets Differentially Influence Infection.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.