abcam

ab314062

Anti-CD14 antibody [BLR187J] - BSA free

Recombinant

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.8 - 8.6 Preservative: 0.09% Sodium azide Constituents: 98% Borate buffered saline
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human CD14 aa 1 to C-terminus. The exact immunogen used to generate this antibody is proprietary information. Database link P08571
Clone number	BLR187J

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	-

ICC

Tested

Species	Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information 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).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	Up to 12 months
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

REACH authorisation
Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances.
It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	CD14 also known as cluster of differentiation 14 is a glycoprotein with a molecular mass of approximately 55 kDa. This protein is expressed mainly on the surface of macrophages monocytes and to a lesser extent on neutrophils. CD14 exists in two forms: membrane-bound (mCD14) and soluble (sCD14). It functions as a co-receptor along with TLR4 (Toll-like receptor 4) and MD-2 for the detection of bacterial lipopolysaccharide (LPS) which is an important component of the outer membrane of Gram-negative bacteria.
Biological function summary	This glycoprotein plays a significant role in the innate immune system by recognizing pathogen-associated molecular patterns (PAMPs). It is part of a receptor complex where CD14 acts alongside LPS binding protein (LPS-R) TLR4 and MD-2 to facilitate pro-inflammatory signaling in response to microbial invasion. By binding to LPS CD14 initiates and amplifies the immune response leading to the production of cytokines and the recruitment of other immune cells to the site of infection.
Pathways	CD14 interacts with the toll-like receptor signaling pathway notably involving TLR4. Upon LPS detection CD14 assists in the activation of TLR4 triggering downstream

	signaling cascades such as NF-κB and MAPK pathways. These pathways result in the transcription of inflammatory cytokines and are essential for the host defense mechanism. The protein complex involving CD14 further interacts with adaptor proteins like MyD88 and TRIF facilitating signal propagation and the immune system's ability to respond to pathogens.
Associated diseases and disorders	Researchers have linked CD14 to sepsis and atherosclerosis. High levels of soluble CD14 (sCD14) are often observed in patients with sepsis indicating its participation in excessive systemic inflammation. In atherosclerosis CD14's role in recognizing LPS contributes to chronic inflammation and the development of plaques in arteries. Through these diseases CD14 connects with TLR4 emphasizing its impact on inflammatory responses and its potential as a therapeutic target.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

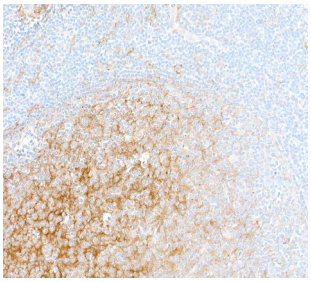
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

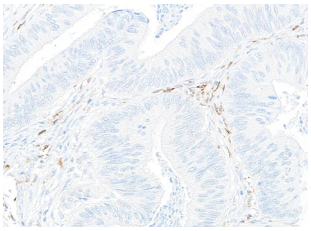
Full details and terms and conditions can be found here:
Terms & Conditions.

6 product images



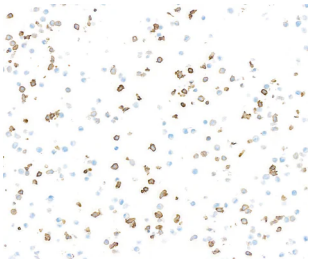
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD14 antibody [BLR187J] - BSA free (ab314062)

Detection of human CD14 in tonsil by IHC. Antibody: Rabbit anti-CD14 recombinant monoclonal antibody [BLR187J]. Secondary:HRP-conjugated goat anti-rabbit IgG. Substrate:DAB



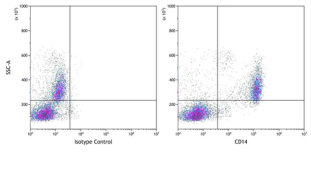
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD14 antibody [BLR187J] - BSA free (ab314062)

Detection of human CD14 in colon carcinoma TIL by IHC. Antibody:Rabbit anti-CD14 recombinant monoclonal antibody [BLR187J] (A700-187 lot 1). Secondary:HRPconjugated goat anti-rabbit IgG (A120-501P). Substrate: DAB



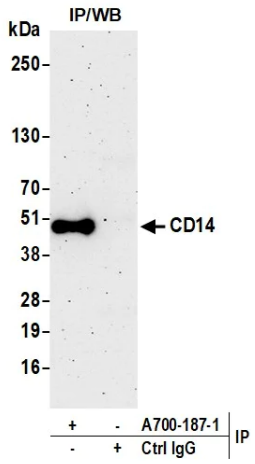
Immunocytochemistry - Anti-CD14 antibody [BLR187J] - BSA free (ab314062)

Detection of human CD14 in MUTZ-3 cells by ICC. Antibody:Rabbit anti-CD14 recombinant monoclonal antibody [BLR187J]. Secondary:HRPconjugated goat anti-rabbit IgG . Substrate: DAB



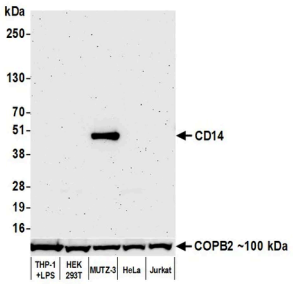
Flow Cytometry - Anti-CD14 antibody [BLR187J] - BSA free (ab314062)

Detection of human CD14 (right) in PBMCs by flow cytometry. Antibody: Rabbit anti-CD14 recombinant monoclonal [BLR187J] or isotype control (left). Secondary: 488-conjugated goat antirabbit IgG. Analysis performed on lymphocyte and monocyte gated population.



Immunoprecipitation - Anti-CD14 antibody [BLR187J] - BSA free (ab314062)

Samples:Whole cell lysate (1.0 mg per IP reaction; 20% of IP loaded) from MUTZ-3 cells prepared using NETN lysis buffer. Antibody:Rabbit antiCD14 recombinant monoclonal antibody [BLR187J] used at 20 µl/mg lysate. For blotting immunoprecipitated CD14, was used at 1:1000. Chemiluminescence with an exposure time of 3 minutes.



Western blot - Anti-CD14 antibody [BLR187J] - BSA free (ab314062)

Samples: Whole cell lysate (50 µg) from THP-1 +LPS, HEK293T, MUTZ-3, HeLa, and Jurkat cells prepared using NETN lysis buffer. Antibody: Rabbit anti-CD14 recombinant monoclonal antibody [BLR187J] used at 1:1000. Secondary: HRP-conjugated goat anti-rabbit IgG. Chemiluminescence with an exposure time of 3 minutes. Lower Panel: Rabbit anti-COPB2 antibody
All lanes:
Western blot - Anti-CD14 antibody [BLR187J] - BSA free (ab314062) at 1/1000 dilution

Lane 1:
THP-1 +LPS Whole cell lysate at 50 µg

Lane 2:
HEK293T Whole cell lysate at 50 µg

Lane 3:
MUTZ-3 Whole cell lysate at 50 µg

Lane 4:
HeLa Whole cell lysate at 50 µg

Lane 5:
Jurkat Whole cell lysate at 50 µg

Secondary

All lanes:
HRP-conjugated goat anti-rabbit IgG

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