BOSTER BIOLOGICAL TECHNOLOGY
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Anti-CD14 Antibody Picoband®

Catalog Number: PB9847

About CD14

CD14 is a single-copy gene encoding 2 protein forms: a 50- to 55-kD glycosylphosphatidylinositol-anchored membrane protein (mCD14) and a monocyte or liver-derived soluble serum protein (sCD14) that lacks the anchor. This gene is located at bands 5q23-q31. The protein encoded by this gene is a surface antigen that is preferentially expressed on monocytes/macrophages. CD14 acts as a co-receptor (along with the Toll-like receptor TLR 4 and MD-2) for the detection of bacterial lipopolysaccharide (LPS). CD14 can bind LPS only in the presence of lipopolysaccharide-binding protein (LBP). Although LPS is considered its main ligand, CD14 also recognizes other pathogen-associated molecular patterns.

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Overview

Product Name	Anti-CD14 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-CD14 Antibody Picoband® catalog # PB9847. Tested in IHC, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P08571

Technical Details

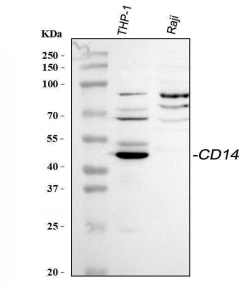
Immunogen	E. coli-derived human CD14 recombinant protein (Position: N65-D327). Human CD14 shares 69.8% and 66.8% amino acid (aa) sequence identity with mouse and rat CD14, respectively.

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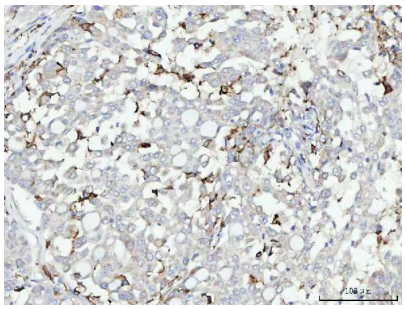
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human

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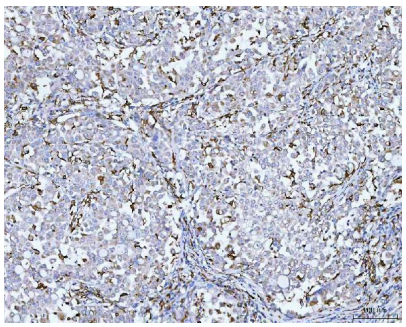
Anti-CD14 Antibody Picoband® (PB9847) Images



Western blot analysis of CD14 using anti-CD14 antibody (PB9847). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human THP-1 whole cell lysates, Lane 2: human Raji whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-CD14 antigen affinity purified polyclonal antibody (Catalog # PB9847) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for CD14 at approximately 50-55 kDa. The expected band size for CD14 is at 40 kDa.



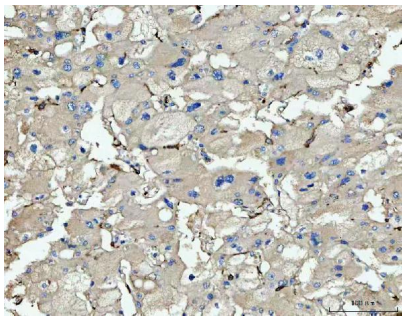
IHC analysis of CD14 using anti-CD14 antibody (PB9847). CD14 was detected in a paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-CD14 Antibody (PB9847) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



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IHC analysis of CD14 using anti-CD14 antibody (PB9847). CD14 was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat

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6 Publications Citing This Product

1. PubMed ID: 31930698, Zhou Z,Liu F,Wang L,Zhu B,Chen Y,Yu Y,Wang X.Inflammation has synergistic effect with nicotine in periodontitis by up-regulating the expression of alpha7 nAChR via phosphorylated GSK-3beta.J Cell Mol Med.2020 Feb;24(4):2663-2676.doi:10.1111/jcmm.14986.Epub 2020 Jan 13.PMID:31930698;PMCID:PMC7028870.

2. PubMed ID: 33500729, Shi M,Shen K,Yang B,Zhang P,Lv K,Qi H,Wang Y,Li M,Yuan Q,Zhang Y. An electroporation strategy to synthesize the membrane-coated nanoparticles for enhanced anti-inflammation therapy in bone infection. Theranostics. 2021 Jan 1;11(5):2349-2363.doi:10.7150/th

3. PubMed ID: 23346371, Huang J, Zhu C, Zhang P, Zhu Q, Liu Y, Zhu Z, Wang M, Li W, Yang G, Dong N, Liu J, Chen L, Zhang Y, Yang R, Deng L, Fan J, Wang X, Liu J, Ma B, Fu Q, Wu K. Sci Rep. 2013;3:1114. Doi: 10.1038/Srep01114. Epub 2013 Jan 23. S100+ Cells: A New Neuro-Im...

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