

Anti-CD163 Antibody Picoband®

Catalog Number: PA1874-1

About CD163

CD163 (Cluster of Differentiation 163) is a protein that in humans is encoded by the CD163 gene. The protein encoded by this gene is a member of the scavenger receptor cysteine-rich (SRCR) superfamily, and is exclusively expressed in monocytes and macrophages. It functions as an acute phase-regulated receptor involved in the clearance and endocytosis of hemoglobin/haptoglobin complexes by macrophages, and may thereby protect tissues from free hemoglobin-mediated oxidative damage. This protein may also function as an innate immune sensor for bacteria and inducer of local inflammation. Alternatively spliced transcript variants encoding different isoforms have been described for this gene.

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Overview

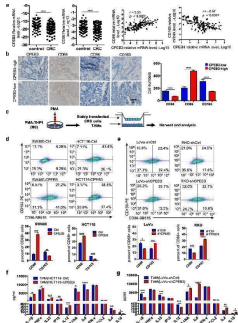
Product Name	Anti-CD163 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-CD163 Antibody catalog # PA1874-1. Tested in IHC, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and 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 Na ₂ HPO ₄ .
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	Q86VB7

Technical Details

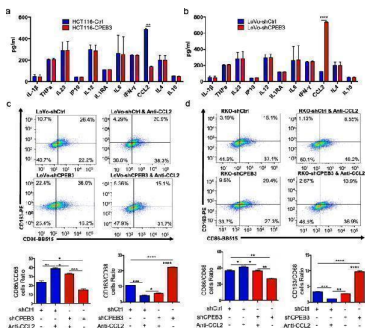
Immunogen	E. coli-derived human CD163 recombinant protein (Position: I1056-L1156).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western

	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

Anti-CD163 Antibody Picoband® (PA1874-1) Images

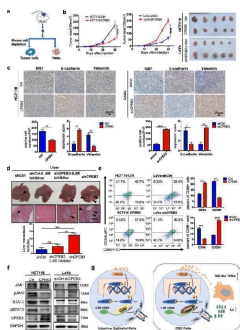


Decreased CPEB3 in human CRC correlates with low CD86 + TAM content and high CD163 + TAM content (a) The expression of CPEB3 and CD86 in 82 pairs of CRC tissues and adjacent non-tumor tissues was detected using qRT-PCR. Correlation between CPEB3 and CD86 or CD163 expression levels in 82 colorectal cancer tissues; error bars, SEM. (b) The protein expression of CPEB3, CD68, CD86, and CD163 in a human colorectal cancer tissue array was detected by IHC staining. Representative photos are shown (400× magnification). The number of CD68 + , CD86 + and CD163 + cells per high-power field in tissues from colorectal cancer patients with different levels of CPEB3 expression; error bars, SEM. (c) Schema for an in vitro model of stably transfected CRC cells co-cultured with TAMs. (d) Flow cytometry was used to explore the surface expression of CD86 and CD163 in SW480-Ctrl/CPEB3 and HCT116-Ctrl/CPEB3 cells; error bars, SEM. (e) Flow cytometry was used to explore the surface expression of CD86 and CD163 in LoVo-shCtrl/shCPEB3 and RKO-shCtrl/shCPEB3 cells; error bars, SEM. (f) We measured the expression of the respective inflammatory cytokines in cell culture supernatants of TAMs co-cultured HCT116-Ctrl/CPEB3 cells using ProcartaPlex combinable panels; error bars, SEM. (g) We measured the expression of the respective inflammatory cytokines in cell culture supernatants of TAM-co-cultured LoVo-shCtrl/shCPEB3 cells using ProcartaPlex combinable panels; error bars, SEM; ns, not significant; * P < 0.05; ** P < 0.01; *** P < 0.001; **** P < 0.0001 Index in PubMed under a CC BY license. PMID: 32653013

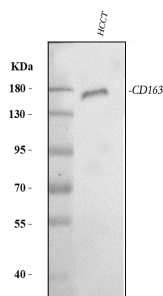


CPEB3 modulates CCL2 secretion in CRC cell supernatants to regulate TAM polarization (a) We measured the expression of the respective inflammatory cytokines in cell culture supernatants of HCT116-Ctrl/CPEB3 cells by ProcartaPlex combinable panels; error bars, SEM. (b) We measured the expression of the respective inflammatory cytokines in the supernatants of LoVo-shCtrl/shCPEB3 cells by ProcartaPlex combinable panels; error bars, SEM. (c) THP-1 macrophages were co-cultured with LoVo-shCtrl/shCPEB3 with or without CCL2-neutralizing antibody (1 ug/mL) for 24 h. Flow cytometry was used to explore the surface expression of CD86 and CD163 in the differentiated macrophages; error bars, SEM. (d) THP-1 macrophages were co-cultured with RKO-shCtrl/shCPEB3 cells with or without a CCL2-neutralizing antibody (1 ug/mL) for 24 h. Flow cytometry was used to explore the surface expression of CD86 and CD163 in the differentiated macrophages. Error bars, SEM. * P < 0.05; ** P < 0.01; *** P < 0.001; **** P < 0.0001 Index in PubMed under a CC BY license. PMID: 32653013

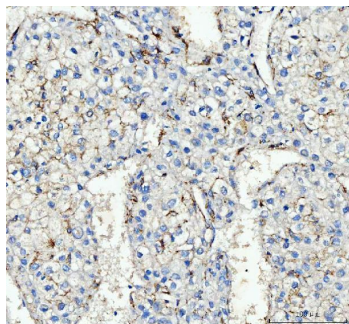
CPEB3 attenuates tumorigenesis and TAM polarization in vivo (a) Schematic of the procedure for separating tumor cells and TAMs. (b) HCT116 cells were stably infected with



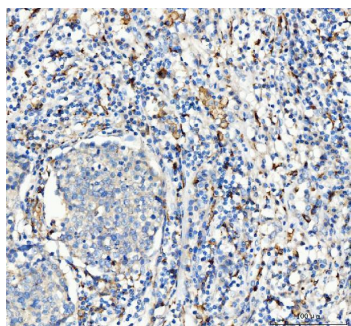
Ctrl and CPEB3 lentivirus, and LoVo cells were stably infected with shCtrl and shCPEB3 sequences. Tumorigenesis assay of Balb/c nude mice subcutaneously injected with HCT116-Ctrl/CPEB3 cells and LoVo-shCtrl/shCPEB3 cells (n = 20). Representative photos of tumors from mice in various groups. (c) IHC staining of Ki67 positive cells was counted per high-power field (PHF), while E-cadherin and vimentin expression scores were counted in tumor tissues in a mouse xenograft model; error bars, SEM. (d) The mice with intra-spleen injection of LoVo-shCtrl/shCPEB3 cells were treated with tocilizumab (5 mg/kg) weekly via intraperitoneally injection. The number of liver metastatic sites (indicated by arrows) was counted under the microscope; error bars, SEM. (e) Macrophages were separated from murine tumor tissues using Percoll-layered liquid. Surface expression of CD86 and CD163 was detected in macrophages using flow cytometry. The percentage of CD86 + or CD163 + cells in macrophages was reported using error bars and SEM. (f) Expression of JAK1, pJAK1, STAT3, and pSTAT3 in the tumor tissues of the two groups were analyzed by western blot analysis. (g) Schematic overview of the mechanisms by which CPEB3 modulate TAM polarization and inhibit colorectal cancer EMT. ** P < 0.01; *** P < 0.001; **** P < 0.0001 Index in PubMed under a CC BY license. PMID: 32653013



Western blot analysis of CD163 using anti-CD163 antibody (PA1874-1). 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 hepatocellular carcinoma tumor tissue (HCCT) 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-CD163 antigen affinity purified polyclonal antibody (Catalog # PA1874-1) 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 CD163 at approximately 150 kDa. The expected band size for CD163 is at 125 kDa.



IHC analysis of CD163 using anti-CD163 antibody (PA1874-1). CD163 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 serum. The tissue section was then incubated with 2 ug/ml rabbit anti-CD163 Antibody (PA1874-1) 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.



IHC analysis of CD163 using anti-CD163 antibody (PA1874-1). CD163 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-CD163 Antibody (PA1874-1) 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.

3 Publications Citing This Product

1. PubMed ID: 32581565, Farag AGA, El Askary SA, Fathy WM, Elbassal F, Azzam AA, Tayel NR, Abdul Karim SS, Shehata WA. Relationship Between sCD163 and mCD163 and Their Implication in the Detection and Typing of Leprosy. Clin Cosmet Investig Dermatol. 2020 Jun 2;13:379-389. doi:10.2147/CC
2. PubMed ID: 27154032, SIV Infection Impairs the Central Nervous System in Chinese Rhesus Macaques
3. PubMed ID: 30323677, il-17 induces macrophages to M2-like phenotype via nF- κ B

Visit bosterbio.com/anti-cd163-antibody-pa1874-1-boster.html to see all 3 publications.

Anti-CD163 Antibody

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