BOSTER BIOLOGICAL TECHNOLOGY
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Anti-Cd163 Antibody Picoband®

Catalog Number: A00812-2

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	Mouse, Rat
Description	Boster Bio Anti-Cd163 Antibody Picoband® catalog # A00812-2. Tested in Flow Cytometry, ELISA, IHC, WB applications. This antibody reacts with Mouse, Rat. 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	ELISA, Flow Cytometry, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
Storage Instructions	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 freezing and thawing.
Host	Rabbit
Uniprot ID	Q2VLH6

Technical Details

Immunogen	E.coli-derived mouse Cd163 recombinant protein (Position: N122-H1039).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western

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	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, 0.25-0.5 ug/ml, Mouse, Rat Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Rat Flow Cytometry(Fixed), 1-3 ug/1x10^6 cells, Mouse ELISA, 0.1-0.5 ug/ml, - Note: For flow cytometry (FCM), suitable for fixed cells only. Not suitable for FACS or surface flow cytometry using live cells.

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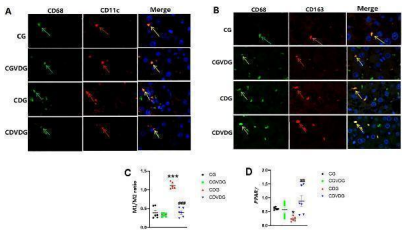
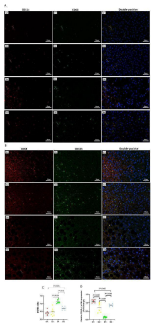
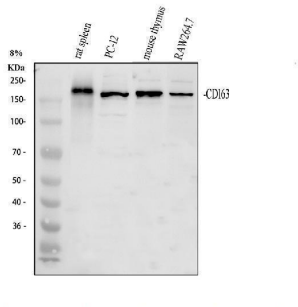
Anti-Cd163 Antibody Picoband® (A00812-2) Images



Effects of 1,25 VD3 supplementation on macrophage polarization and PPARgamma expression in NASH rats. (A) M1-type KCs identified by double immunofluorescence staining; green arrows indicate CD68-positive cells, red arrows indicate CD11c-positive cells, and yellow arrows indicate CD11c/CD68 double-positive cells (M1KCs). (B) M2-type KCs identified by double immunofluorescence staining; green arrows indicate CD68-positive cells, red arrows indicate CD163-positive cells, and yellow arrows indicate CD163/CD68 double-positive cells (M2KCs). Antibodies were diluted as follows: anti-CD68 (1:100), anti-CD11c (1:100), and anti-CD163 (1:200). (C) The M1/M2 macrophage ratio was determined by quantifying the proportion of M1 and M2 KCs in liver tissue, as identified through double immunofluorescence staining. (D) PPARgamma levels in liver tissue of the indicated groups were determined by qPCR and expressed as relative mRNA levels following normalization to GAPDH mRNA levels. Data are presented as mean ± SEM, n=6. *p < 0.05 and ***p < 0.001 vs CG; ##p < 0.01 and ###p < 0.001 vs CDG.Index in PubMed under a CC BY license. PMID: 40190400



Effects of n-6 PUFA on liver macrophage phenotype in rats with NASH induced by a choline-deficient diet. (A) M1-type Kupffer cells (KCs) identified by double staining: red arrows show CD11c-positive cells, green arrows show CD68-positive cells, and yellow arrows highlight CD11c and CD68 double-positive M1-type KCs (Scale bar – 50 uM). (B) M2-type KCs identified similarly, with red arrows indicating CD163-positive cells, green arrows showing CD68-positive cells, and yellow arrows marking CD163 and CD68 double-positive M2-type KCs (Scale bar – 50 uM). For (A,B) (see) for full-size photomicrographs. (C) M1/M2 phenotype ratio (unitless), calculated as the proportion of CD68 + CD11c + to CD68 + CD163 + cells. (D) Relative PPAR-gamma2 mRNA expression (fold change normalized to GAPDH) in the liver, which is linked to macrophage polarization and inflammation. Data are expressed as mean ±SEM; n = 6/group.Index in PubMed under a CC BY license. PMID: 40626231



Western blot analysis of Cd163 using anti-Cd163 antibody (A00812-2). Electrophoresis was performed on a 8% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: rat spleen tissue lysates, Lane 2: rat PC-12 whole cell lysates, Lane 3: mouse thymus tissue lysates, Lane 4: mouse RAW264.7 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-Cd163 antigen affinity purified polyclonal

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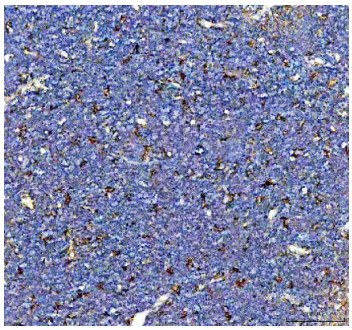
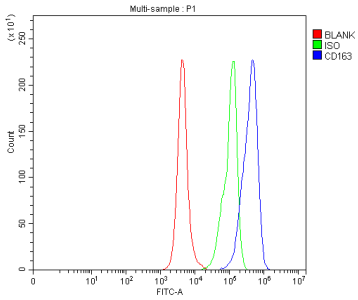
antibody (Catalog # A00812-2) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for Cd163 at approximately 150-160 kDa. The expected band size for Cd163 is at 121 kDa.



IHC analysis of Cd163 using anti-Cd163 antibody (A00812-2). Cd163 was detected in a paraffin-embedded section of rat thymus 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 (A00812-2) 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.



Flow Cytometry analysis of RAW264.7 cells using anti-Cd163 antibody (A00812-2). Overlay histogram showing RAW264.7 cells stained with A00812-2 (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-Cd163 Antibody (A00812-2, 1 ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

1 Publications Citing This Product

1. PubMed ID: 10.1016/j.biomaterials.2021.121323, Bioinspired design of mannose-decorated globular lysine dendrimers promotes diabetic wound healing by orchestrating appropriate macrophage polarization

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