abcam

ab171087

Anti-CD58 antibody [TS2/9]

Anti-CD58 antibody [TS2/9] (ab171087) is a mouse monoclonal antibody detecting CD58 in **Western Blot, Flow Cytometry, ICC/IF**. Suitable for **Human, Mouse**.

- KO validated for confirmed specificity

KO Validated

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Full Length Protein corresponding to Human CD58. The exact immunogen used to generate this antibody is proprietary information. Database link P19256
Carrier free	Yes
Clone number	TS2/9
Purification technique	Affinity purification Protein A
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Human
Dilution info	1/100 - 1/500
Notes	-

Species	Mouse
Dilution info	1/100 - 1/500
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information CD58

Function	Ligand of the T-lymphocyte CD2 glycoprotein. This interaction is important in mediating thymocyte interactions with thymic epithelial cells, antigen-independent and -dependent interactions of T-lymphocytes with target cells and antigen-presenting cells and the T-lymphocyte rosetting with erythrocytes. In addition, the LFA-3/CD2 interaction may prime response by both the CD2+ and LFA-3+ cells.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What is this antibody validated in?
Anti-CD58 antibody [TS2/9] (ab171087) is a mouse monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Flow Cyt), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, Mouse samples.

What is the molecular weight of CD58?
Anti-CD58 [TS2/9] (ab171087) specifically detects a band for CD58 (UniProt: P19256) at a molecular weight of 24kDa.

Specificity confirmed
The specificity of Anti-CD58 antibody [TS2/9] (ab171087) has been confirmed by Western blot testing in CD58 Knockout HAP1 cells.

Supplementary info

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

Activity summary	CD58 also known as lymphocyte function-associated antigen 3 (LFA-3) is a glycoprotein with a molecular mass of approximately 60 kDa. It is present on the surface of various cell types including antigen-presenting cells epithelial cells and some other leukocytes. This protein serves as a ligand for CD2 which is expressed on T cells and natural killer cells. Through its interaction with CD2 CD58 mediates cell adhesion and plays a role in immunological synapse formation which is essential for effective immune responses.
Biological function summary	Lymphocyte function-associated antigen 3 acts as a significant participant in the immune system. It plays a role in T cell activation and facilitates interactions between T cells and antigen-presenting cells. CD58 forms part of a complex network of cell surface proteins that enhances immune surveillance and response. Its role highlights its importance in adaptive immunity by promoting cell-to-cell communication and activation.
Pathways	CD58 participates in the cell adhesion pathways. It interacts closely with CD2 which is involved in the activation and signaling of T cells. Through this interaction CD58 plays roles in pathways like T cell receptor signaling and immune response. It enhances cell-cell adhesion helping T cells maintain their position during immune surveillance and activation.
Associated diseases and disorders	CD58 relates to conditions such as autoimmune diseases and certain cancers. In autoimmune disorders aberrant expression or function of CD58 may contribute to inappropriate immune activation leading to tissue damage. In cancer CD58 alterations can affect tumor immune evasion influencing how the immune system recognizes and attacks cancer cells. In multiple sclerosis an autoimmune disease the interaction between CD58 and CD2 has been studied providing insights into its role in disease mechanisms.

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

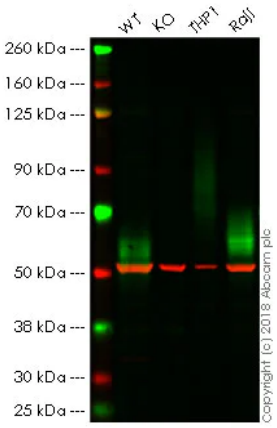
We do not recommend this combination. It is not covered by our product promise.

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



Western blot - Anti-CD58 antibody [TS2/9] (ab171087)

Lanes 1 - 4: Merged signal (red and green). Green - ab171087 observed at 43 kDa. Red - loading control, ab176560, observed at 50 kDa.

ab171087 was shown to specifically react with CD58 in wild-type HAP1 cells as signal was lost in CD58 knockout cells. Wild-type and CD58 knockout samples were subjected to SDS-PAGE. ab171087 and ab176560 (Rabbit anti alpha Tubulin loading control) were incubated overnight at 4°C at 1/250 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Mouse IgG H&L (IRDye® 800CW) preabsorbed ab216772 and Goat anti-Rabbit IgG H&L (IRDye® 680RD) preabsorbed ab216777 secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.
All lanes:
Western blot - Anti-CD58 antibody [TS2/9] (ab171087) at 1/250 dilution

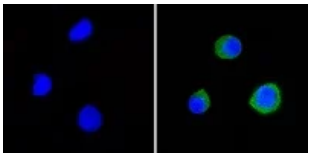
Lane 1:
Wild-type HAP1 whole cell lysate at 40 µg

Lane 2:
CD58 knockout HAP1 whole cell lysate at 40 µg

Lane 3:
THP1 whole cell lysate at 40 µg

Lane 4:
Raji whole cell lysate at 40 µg

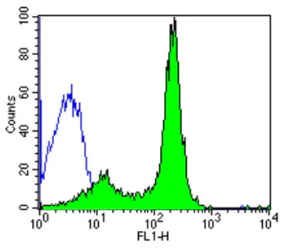
Predicted band size: 28 kDa



Immunocytochemistry/ Immunofluorescence - Anti-CD58 antibody [TS2/9] (ab171087)

CD58 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-CD58 antibody

Immunofluorescent analysis of CD58 (green) showing staining in the cytoplasm of Raji cells (right) compared to a negative control without primary antibody (left). Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with a CD58 monoclonal antibody (ab171087) in 3% BSA-PBS at a dilution of 1:20 and incubated overnight at 4°C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight-conjugated secondary antibody in PBS at room temperature in the dark. F-actin (red) was stained with a fluorescent red phalloidin and nuclei (blue) were stained with Hoechst or DAPI. Images were taken at a magnification of 60x.

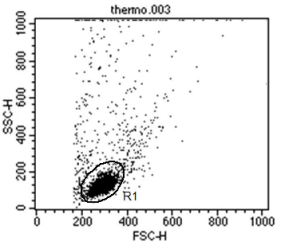


Cell: peripheral blood lymphocytes
Concentration: 0.5µg/test （100ul）
Theory location: Membrane

Flow Cytometry - Anti-CD58 antibody [TS2/9] (ab171087)

CD58 Flow Cytometry staining using mouse Anti-CD58 antibody

Flow cytometry analysis of CD58 showing positive staining in the membrane of PBMC cells compared to an isotype control (blue). Human blood was collected, combined with a hydrophilic polysaccharide, centrifuged, transferred to a conical tube and washed with PBS. 50 ul of cell solution was added to each tube at a dilution of 2x10^7 cells/ml, followed by the addition of 50 ul of isotype control and ab171087 (0.5 ug/test). Cells were incubated for 30 min at 4°C and washed with a cell buffer, followed by incubation with a DyLight 488-conjugated goat anti-mouse IgG (H+L) secondary for 30 min at 4°C in the dark. FACS analysis was performed using 400 ul of cell buffer.

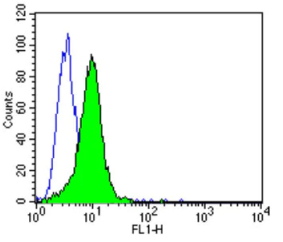


Cell: peripheral blood lymphocytes
Concentration: 0.5µg/test （100ul）
Theory location: Membrane

Flow Cytometry - Anti-CD58 antibody [TS2/9] (ab171087)

CD58 Flow Cytometry staining using mouse Anti-CD58 antibody

Flow cytometry analysis of CD58 showing positive staining in the membrane of PBMC cells. Human blood was collected, combined with a hydrophilic polysaccharide, centrifuged, transferred to a conical tube and washed with PBS. 50 ul of cell solution was added to each tube at a dilution of 2x10^7 cells/ml, followed by the addition of 50 ul of isotype control and ab171087 (0.5 ug/test). Cells were incubated for 30 min at 4°C and washed with a cell buffer, followed by incubation with a DyLight 488-conjugated goat anti-mouse IgG (H+L) secondary for 30 min at 4°C in the dark. FACS analysis was performed using 400 ul of cell buffer.

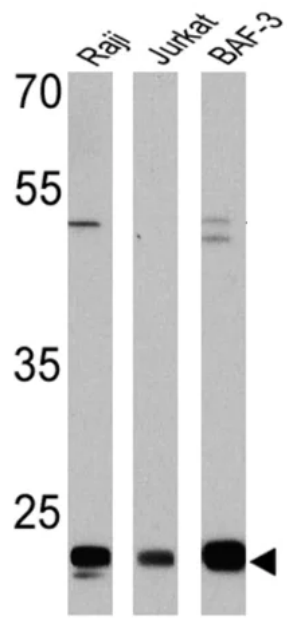


Cell: BAF-3
Concentration: 0.25µg/test （100ul）
Theory location: Membrane

Flow Cytometry - Anti-CD58 antibody [TS2/9] (ab171087)

CD58 Flow Cytometry staining using mouse Anti-CD58 antibody

Flow cytometry analysis of CD58 showing weakly positive staining in the membrane of BAF-3 cells compared to an isotype control (blue). Cells were harvested, adjusted to a concentration of 1-5x10^6 cells/ml, fixed with 2% paraformaldehyde, washed with PBS, and incubated with ab171087 (0.25 ug/test) for 60 min at room temperature. Cells were then blocked in a solution of 2% BSA-PBS for 30 min at room temperature, incubated for 40 min at room temperature in the dark using a Dylight 488-conjugated goat anti-mouse IgG (H+L) secondary antibody, and re-suspended in PBS for FACS analysis.



Western blot - Anti-CD58 antibody [TS2/9] (ab171087)

All lanes:
Western blot - Anti-CD58 antibody [TS2/9] (ab171087) at 1/100 dilution

Lane 1:
Raji cell lysate at 25 µg

Lane 2:
Jurkat cell lysate at 25 µg

Lane 3:
BAF-3 cell lysate at 25 µg

Predicted band size: 28 kDa

Observed band size: 24 kDa

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