abcam

ab213092

Anti-CD63 antibody [MX-49.129.5] - BSA and Azide free

Recombinant

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	MX-49.129.5
Purification technique	Affinity purification
Light chain type	kappa
Concentration	1.021 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human

Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information CD63

Function	Functions as a cell surface receptor for TIMP1 and plays a role in the activation of cellular signaling cascades. Plays a role in the activation of ITGB1 and integrin signaling, leading to the activation of AKT, FAK/PTK2 and MAP kinases. Promotes cell survival, reorganization of the actin cytoskeleton, cell adhesion, spreading and migration, via its role in the activation of AKT and FAK/PTK2. Plays a role in VEGFA signaling via its role in regulating the internalization of KDR/VEGFR2. Plays a role in intracellular vesicular transport processes, and is required for normal trafficking

	of the PMEL luminal domain that is essential for the development and maturation of melanocytes. Plays a role in the adhesion of leukocytes onto endothelial cells via its role in the regulation of SELP trafficking. May play a role in mast cell degranulation in response to Ms4a2/FceRI stimulation, but not in mast cell degranulation in response to other stimuli.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C, -20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle, Do Not Freeze

Notes

This product has switched from a hybridoma to recombinant production method on 9th February 2022.
What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Supplementary info

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

Activity summary	CD63 is a protein commonly known as LAMP-3 a member of the tetraspanin family with a molecular weight of approximately 25-65 kDa depending on post-

	translational modifications such as glycosylation. It resides mainly on the membrane of intracellular vesicles such as lysosomes and platelets. CD63 also appears on the surface of activated cells particularly in immune cells. Researchers often use CD63 as a marker in assays including CD63 western blot techniques due to its distinct expression patterns.
Biological function summary	CD63 participates in various cellular processes including membrane trafficking cell adhesion and signal transduction. It associates with integrins and other tetraspanins forming complexes that influence cellular adhesion and migration. Through its role in exosome formation CD63 contributes significantly to intercellular communication by facilitating the transfer of proteins lipids and RNA between cells.
Pathways	CD63 plays a role in pathways linked to cell proliferation and migration and immune response regulation. Within the integrin-mediated signaling pathway CD63 interacts with proteins such as integrins to promote cell adhesion and migration. CD63 also links to vesicle trafficking pathways collaborating with proteins involved in exocytosis and endocytosis which affect cell membrane restructuring and intracellular transport.
Associated diseases and disorders	CD63 shows connections with cancer and immune system disorders. Its role in promoting cell adhesion and migration links it with cancer metastasis including melanoma and breast cancer where CD63 expression levels often rise. Additionally CD63 associates with allergic reactions due to its involvement in histamine release where it impacts immune proteins like FcεRI which participate in allergy pathogenesis.

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

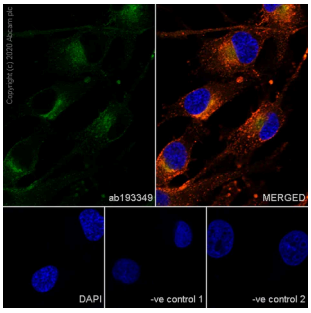
We do not recommend this combination. It is not covered by our product promise.

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.

7 product images

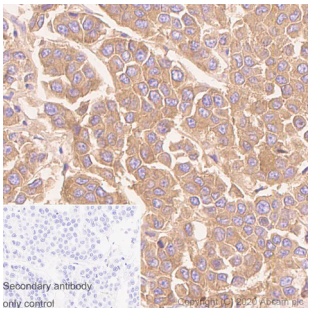


Immunocytochemistry/ Immunofluorescence - Anti-CD63 antibody [MX-49.129.5] - BSA and Azide free (ab213092)

CD63 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-CD63 antibody

This data was developed using ab193349, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized SK-MEL-28 (Human malignant melanoma) cells labelling CD63 with ab193349 at 1/50 dilution, followed by Goat Anti-Mouse IgG H&L (Alexa Fluor® 488) (ab150113) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining in SK-MEL-28 cell line. The nuclear counter stain is DAPI (blue).

CD63 is also detected with Rabbit monoclonal Anti-CD63 antibody [EPR22458-280] (ab252919) at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 594) (ab150080) secondary antibody at 1/500 dilution (red).
The negative controls are as follows:
-ve control 1: ab193349 at 1/50 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 594) (ab150080) secondary antibody at 1/500 dilution.
-ve control 2: Anti-CD63 antibody [EPR22458-280] (ab252919) at 1/100 dilution, followed by Goat Anti-Mouse IgG H&L (Alexa Fluor® 488) (Alexa Fluor® 488) (ab150113) secondary antibody at 1/1000 dilution.

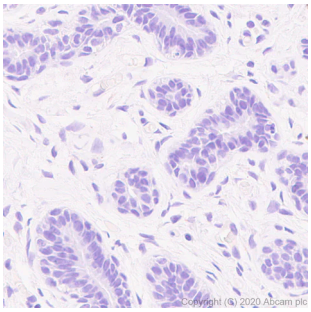


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD63 antibody [MX-49.129.5] - BSA and Azide free (ab213092)

CD63 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-CD63 antibody

This data was developed using ab193349, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded human melanoma tissue labelling CD63 with ab193349 at 1/5000 dilution, followed by Goat Anti-Mouse IgG H&L (HRP polymer) (ab214879) at the supplied dilution. Cytoplasmic staining on human melanoma is observed. Counter stained with Hematoxylin. Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) was performed for 20 mins, before the section was incubated with ab193349 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Secondary antibody only control: Used PBS instead of primary antibody.

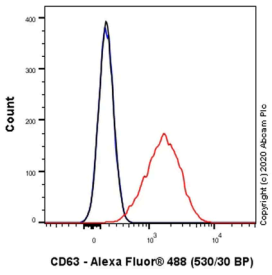


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD63 antibody [MX-49.129.5] - BSA and Azide free (ab213092)

CD63 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-CD63 antibody

This data was developed using ab193349, the same antibody clone in a different buffer formulation.

Negative control staining using ab193349. Immunohistochemical analysis of paraffin-embedded human breast tissue labelling CD63 with ab193349 at 1/5000 dilution, followed by Goat Anti-Mouse IgG H&L (HRP polymer) (ab214879) at the supplied dilution. No staining on human breast is observed, as expected (PMID: 22957045). Counter stained with Hematoxylin. Heat mediated antigen retrieval with Citrate buffer (pH 6.0, epitope retrieval solution 1) was performed for 20 mins, before the section was incubated with ab193349 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

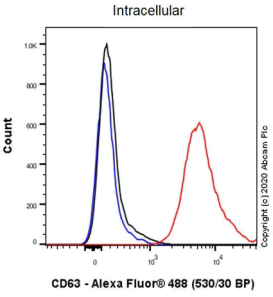


Flow Cytometry - Anti-CD63 antibody [MX-49.129.5] - BSA and Azide free (ab213092)

CD63 Flow Cytometry staining using mouse Anti-CD63 antibody

This data was developed using ab193349, the same antibody clone in a different buffer formulation.
Flow cytometric analysis of SK-MEL-28 (Human malignant melanoma) cell line labelling CD63 with ab193349 at 1/1000 dilution (red) compared with a Mouse monoclonal IgG (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti-Mouse IgG H&L (Alexa Fluor® 488, ab150113) at 1/2000 dilution was used as the secondary antibody.

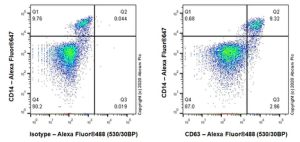
Gated on viable cells.



Flow Cytometry (Intracellular) - Anti-CD63 antibody [MX-49.129.5] - BSA and Azide free (ab213092)

CD63 Flow Cytometry (Intracellular) staining using mouse Anti-CD63 antibody

This data was developed using ab193349, the same antibody clone in a different buffer formulation.
Flow cytometric (intracellular) analysis of 4% paraformaldehyde-fixed, 90% methanol permeabilised SK-MEL-28 (Human malignant melanoma) cell line labelling CD63 with ab193349 at 1/1000 dilution (red) compared with a Mouse monoclonal IgG (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti-Mouse IgG H&L (Alexa Fluor® 488, ab150113) at 1/2000 dilution was used as the secondary antibody.

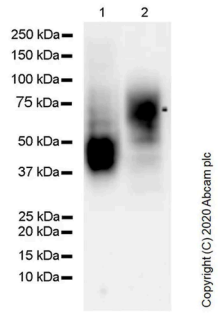


Flow Cytometry - Anti-CD63 antibody [MX-49.129.5] - BSA and Azide free (ab213092)

CD63 Flow Cytometry staining using mouse Anti-CD63 antibody

This data was developed using ab193349, the same antibody clone in a different buffer formulation.
Flow cytometric analysis of human peripheral blood mononuclear cells (PBMC) labeling CD63 with ab193349 at 1/1000 dilution (right), compared with a Mouse monoclonal IgG (left). Goat anti mouse IgG (Alexa Fluor® 488, ab150113), at 1/2000 dilution was used as the secondary antibody.

Cells were stained with mouse IgG or ab193349, then stained with anti-CD14 conjugated to Alexa Fluor® 647. Gated on viable cells.



Western blot - Anti-CD63 antibody [MX-49.129.5] - BSA and Azide free (ab213092)

CD63 Western blot staining using mouse Anti-CD63 antibody

This data was developed using ab193349, the same antibody clone in a different buffer formulation.
Blocking and diluting buffer and concentration: 5% NFDM/TBST.

CD63 can undergo glycosylation as shown in lane 1 and 2 (PMID: 9890706, 28740179).
Samples are non-boiled as boiling may cause protein aggregates.

All lanes:
Western blot - Anti-CD63 antibody [MX-49.129.5] (ab193349) at 1/1000 dilution

Lane 1:
HUVEC (human umbilical vein endothelial cell), whole cell lysate at 40 µg

Lane 2:
HL-60 (human Acute Promyelocytic Leukemia promyeloblast), whole cell lysate at 40 µg

Secondary

All lanes:
Peroxidase-Conjugated Goat anti-Mouse IgG (H+L) at 1/10000 dilution

Exposure time: 59s

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