abcam

ab315108

Anti-CD63 antibody [RM1095]

Anti-CD63 antibody [RM1095] (ab315108) is a rabbit recombinant multiclonal antibody detecting CD63 in **Western Blot, Flow Cytometry, IP, IHC-P, ICC/IF**. Suitable for **Human, Mouse**.

- Biophysical QC for unrivalled batch-batch consistency

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Multiclonal
Immunogens	The exact immunogen used to generate this antibody is proprietary information.
Clone number	RM1095
Purification technique	Affinity purification Protein A
Specificity	Unsuitable for mouse IHC, FC and IP.
Concentration	0.502 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Species	Mouse
Dilution info	1/1000
Notes	-

Not recommended

Species	Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Species	Mouse
Dilution info	1/100
Notes	-

Not recommended

Species	Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/5000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1/500
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	1/30
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 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-CD63 antibody [RM1095] (ab315108) is a rabbit recombinant recombinant multiclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Flow Cyt), Immunoprecipitation (IP), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, Mouse samples.

What is the molecular weight of CD63?
Anti-CD63 [RM1095] (ab315108) specifically detects a band for CD63 (UniProt: P08962) at a molecular weight of

26kDa.

Other related products
We have a range of other formats of antibody clone [RM1095] also available for your convenience: ab315108, Carrier free - ab315109

What are recombinant multiclonals?
Recombinant multiclonals are a mixture of recombinant antibodies co-expressed from a library of heavy and light chains. They offer several advantages including:

- The sensitivity of polyclonal antibodies by recognising multiple epitopes
- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

View our range of recombinant multiclonal antibodies.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

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

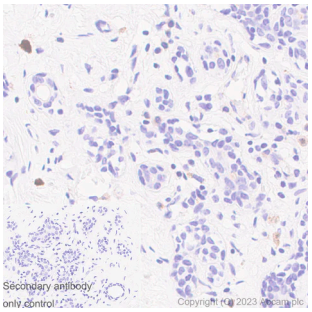
We do not recommend this combination. It is not covered by our product promise.

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.

10 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD63 antibody [RM1095] (ab315108)

CD63 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human breast using rabbit Anti-CD63 antibody

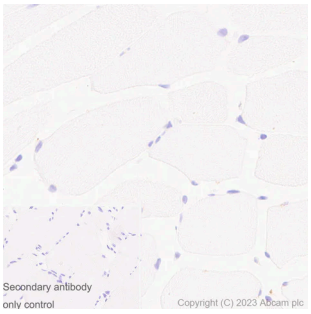
Immunohistochemical analysis of paraffin-embedded Human breast tissue labeling CD63 with ab315108 at 1/5000 (0.105 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Low expression tissue: no staining on the breast epithelial cells, positive staining on the stromal immune cells in human breast. The section was incubated with ab315108 for 30 mins at room

temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD63 antibody [RM1095] (ab315108)

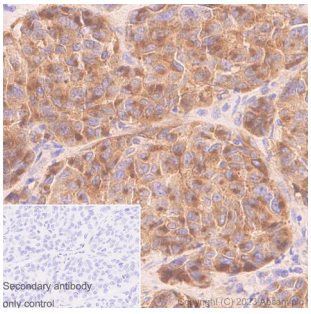
CD63 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human skeletal muscle using rabbit Anti-CD63 antibody

Immunohistochemical analysis of paraffin-embedded Human skeletal muscle tissue labeling CD63 with ab315108 at 1/5000 (0.105 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Low expression tissue: no staining on human skeletal muscle cells, but weak staining on the immune cells. The section was incubated with ab315108 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



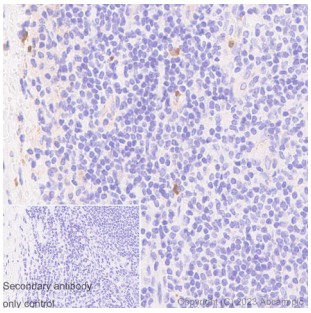
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD63 antibody [RM1095] (ab315108)

Immunohistochemical analysis of paraffin-embedded Human melanoma tissue labeling CD63 with ab315108 at 1/5000 (0.105 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on human melanoma. The section was incubated with ab315108 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD63 antibody [RM1095] (ab315108)

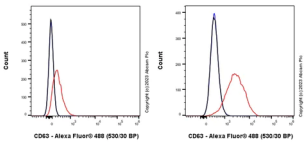
Immunohistochemical analysis of paraffin-embedded Human tonsil tissue labeling CD63 with ab315108 at 1/5000 (0.105 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on human tonsil. The section was incubated with ab315108 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins

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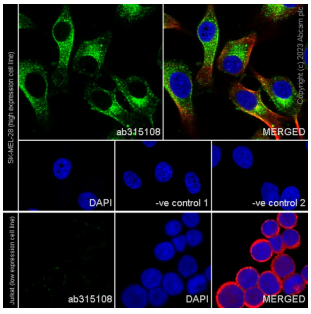


Flow Cytometry - Anti-CD63 antibody [RM1095] (ab315108)

Flow cytometric analysis of Jurkat (human T cell leukemia T lymphocyte from peripheral blood, Left) / SK-MEL-28 (human malignant melanoma cell, Right) cells labelling CD63 with ab315108 at 1/500 dilution (0.1 ug)/Red compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

Low expression: Jurkat. Gated on viable cells.



Immunocytochemistry/ Immunofluorescence - Anti-CD63 antibody [RM1095] (ab315108)

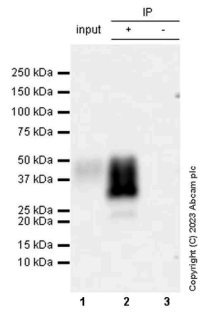
CD63 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CD63 antibody

Immunofluorescent analysis of 80% Methanol-fixed, 0.1% TritonX-100 permeabilized SK-MEL-28 (human malignant melanoma) cells labelling CD63 with ab315108 at 1/100 (5.24 ug/ml) dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 (2 ug/ml) dilution (Green).

Confocal image showing cytoplasmic staining in SK-MEL-28 cell line. Low expression cell line: Jurkat. Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8).

ab7291 Anti-alpha Tubulin mouse monoclonal antibody was used to counterstain tubulin at 1/1000 (1 ug/ml) dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 (2 ug/ml) dilution.



Immunoprecipitation - Anti-CD63 antibody [RM1095] (ab315108)

CD63 was immunoprecipitated from 0.35 mg SK-MEL-28 (human malignant melanoma cell) whole cell lysate with ab315108 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab315108 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution.

Lane 1: SK-MEL-28 (human malignant melanoma cell) whole cell lysate

Lane 2: ab315108 IP in SK-MEL-28 (human malignant melanoma cell) whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab315108 in SK-MEL-28 whole cell lysate

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

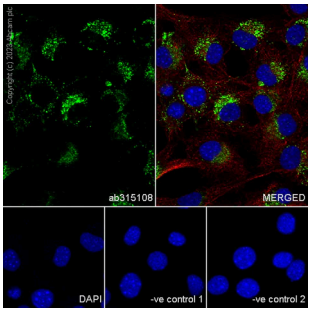
All lanes:
Immunoprecipitation - Anti-CD63 antibody [RM1095] (ab315108) at 1/30 dilution

All lanes:
SK-MEL-28 (human malignant melanoma cell) whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Exposure time: 180s



Immunocytochemistry/ Immunofluorescence - Anti-CD63 antibody [RM1095] (ab315108)

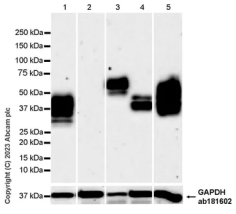
CD63 Immunocytochemistry/ Immunofluorescence staining of C2C12 (mouse myoblasts myoblast) using rabbit Anti-CD63 antibody

Immunofluorescent analysis of 80% Methanol-fixed, 0.1% TritonX-100 permeabilized C2C12 (mouse myoblasts myoblast) cells labelling CD63 with ab315108 at 1/100 (5.24 ug/ml) dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 (2 ug/ml) dilution (Green).

Confocal image showing cytoplasmic staining in C2C12 cells. Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8).

ab7291 Anti-alpha Tubulin mouse monoclonal antibody was used to counterstain tubulin at 1/1000 (1 ug/ml) dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 (2 ug/ml) dilution.



Western blot - Anti-CD63 antibody [RM1095] (ab315108)

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

Low expression: Jurkat.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:

Western blot - Anti-CD63 antibody [RM1095] (ab315108) at 1/1000 dilution

Lane 1:
SK-MEL-28 (human malignant melanoma cell) whole cell lysate at 20 µg

Lane 2:
Jurkat (human T cell leukemia T lymphocyte from peripheral blood) whole cell lysate at 20 µg

Lane 3:
bEnd.3 (mouse brain endothelial cell) whole cell lysate at 20 µg

Lane 4:
NIH/3T3 (mouse embryonic fibroblast) whole cell lysate at 20 µg

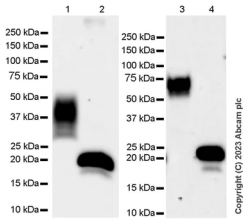
Lane 5:
C2C12 (mouse myoblast) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 30-65 kDa, 36 kDa

Exposure time: 180s



Western blot - Anti-CD63 antibody [RM1095] (ab315108)

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

CD63 is a glycoprotein of approximately 30-65 kDa and detected as 25kDa bands after de-glycosylation treatment.

Exposure time: Lanes 1-2: 37 seconds; Lanes 3-4: 180 seconds

All lanes:
Western blot - Anti-CD63 antibody [RM1095] (ab315108) at 1/1000 dilution

Lane 1:
Untreated SK-MEL-28 (human malignant melanoma cell) whole cell lysate at 15 µg

Lane 2:
SK-MEL-28 whole cell lysate treated with Peptide:N-glycosidase F (PNGase F) at 15 µg

Lane 3:
Untreated bEnd.3 (mouse brain endothelial cell) whole cell lysate at 15 µg

Lane 4:
bEnd.3 whole cell lysate treated with Peptide:N-glycosidase F (PNGase F) at 15 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 30-65 kDa, 25 kDa

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