abcam

ab1318

Anti-CD63 antibody [NK1/C3]

KO Validated

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.3 - 7.5 Preservative: 0.05% Sodium azide Constituents: 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing MeWo cell line protein. The exact immunogen used to generate this antibody is proprietary information.
Clone number	NK1/C3
Purity	IgG fraction
Specificity	This antibody is specific to a 53 kD protein, expressed on activated platelets. CD63 is a lysosomal membrane glycoprotein that is translocated to plasma membrane after platelet activation. It is also expressed on granulocytes, B cells and T cells.
Light chain type	kappa
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	1-5 µg/mL
Notes	Signal can be observed in cells fixed with methanol or PFA.

IHC-P

Tested

Species	Human
Dilution info	1/100 - 1/200
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1/100
Notes	(Also see PMID 19129916). ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

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
Storage information	Avoid freeze / thaw cycle

Notes

CD63 is expressed on activated platelets. CD63 is a lysosomal membrane glycoprotein that is translocated to plasma membrane after platelet activation. It is also present in monocytes and macrophages and is weakly expressed in granulocytes, B, and T cells. CD63 is identical to the melanoma-associated antigen ME491 and to the platelet antigen PTLGP40.

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

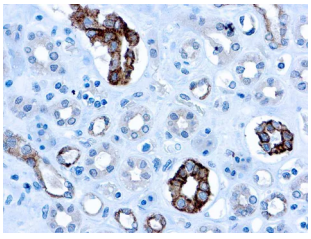
We do not recommend this combination. It is not covered by our product promise.

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.

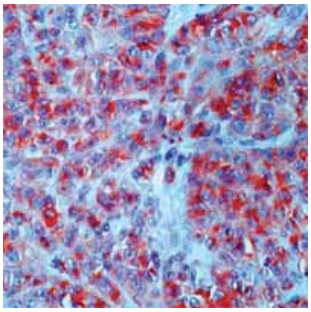
4 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD63 antibody [NK1/C3] (ab1318)

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

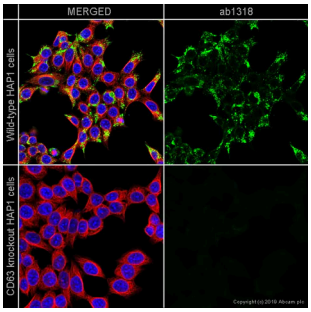
Formalin-fixed, paraffin-embeded human melanoma tissue stained for CD63 using ab1318 at 1/100 dilution in immunohistochemical analysis. Antigen retrieval with citrate buffer pH 6.0



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD63 antibody [NK1/C3] (ab1318)

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

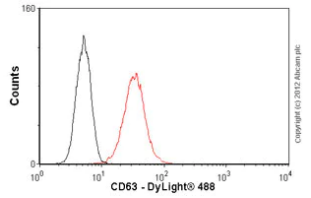
ab1318 staining human melanoma by IHC-P.



Immunocytochemistry/ Immunofluorescence - Anti-CD63 antibody [NK1/C3] (ab1318)

CD63 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-CD63 antibody

ab1318 staining CD63 in wild-type HAP1 cells (top panel) and CD63 knockout HAP1 cells (bottom panel). The cells were fixed with 100% methanol (5min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab1318 at 1ug/ml and ab6046 (Tubulin) at 1/1000 dilution overnight at +4°C, followed by a further incubation at room temperature for 1h with a goat secondary antibody to mouse IgG (Alexa Fluor® 488) (ab150117) at 2 µg/ml (shown in green) and a goat secondary antibody to rabbit IgG (Alexa Fluor® 594) (ab150080) at 2 µg/ml (shown in pseudo color red). Nuclear DNA was labelled in blue with DAPI.
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



Flow Cytometry - Anti-CD63 antibody [NK1/C3] (ab1318)

CD63 Flow Cytometry staining using mouse Anti-CD63 antibody

Overlay histogram showing HL60 cells stained with ab1318 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab1318, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-Mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was Mouse IgG1 [ICIGG1] (ab91353, 2 µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in HL60 cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.

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