abcam

ab264539

Anti-CD44 antibody [C44Mab-5]

Lab Essentials | Recombinant | KO Validated

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	C44Mab-5
Purification technique	Affinity purification Protein A
Light chain type	kappa
Concentration	0.991 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1.055 µg/mL
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1.226 µg/mL
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	0.253 µg/mL
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

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

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

Target data

See full target information CD44

Function

Cell-surface receptor that plays a role in cell-cell interactions, cell adhesion and migration, helping them to sense and respond to changes in the tissue microenvironment (PubMed:16541107, PubMed:19703720, PubMed:22726066). Participates thereby in a wide variety of cellular functions including the activation, recirculation and homing of T-lymphocytes, hematopoiesis, inflammation and response to bacterial infection (PubMed:7528188). Engages, through its ectodomain, extracellular matrix components such as hyaluronan/HA, collagen, growth factors, cytokines or proteases and serves as a platform for signal transduction by assembling, via its cytoplasmic domain, protein complexes containing receptor kinases and membrane proteases (PubMed:18757307, PubMed:23589287). Such effectors include PKN2, the RhoGTPases RAC1 and RHOA, Rho-kinases and phospholipase C that coordinate signaling pathways promoting calcium mobilization and actin-mediated cytoskeleton reorganization essential for cell migration and adhesion (PubMed:15123640). Upon interaction with LGALS9 ligand, activates downstream signaling components including LCK, ERK and MAPK to promotes NK cell activation (PubMed:37006235). (Microbial infection) Promotes foot-and-mouth disease virus internalization via macropinocytosis.

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 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.

Want a custom formulation?
This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com

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

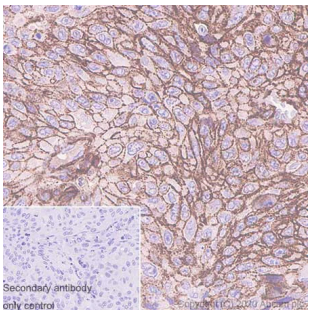
We do not recommend this combination. It is not covered by our product promise.

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.

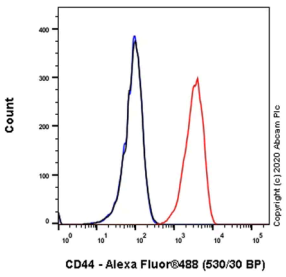
7 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD44 antibody [C44Mab-5] (ab264539)

CD44 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-CD44 antibody

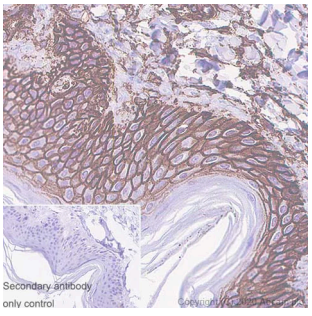
Formalin-fixed, paraffin-embedded Human lung carcinoma tissue stained for CD44 using ab264539 at 0.253 µg/mL followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) in immunohistochemical analysis. Counterstained with Hematoxylin. Membranous staining on Human lung carcinoma. The section was incubated with ab264539 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.
Secondary antibody only control: Used PBS instead of the primary antibody, secondary antibody was a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).



Flow Cytometry - Anti-CD44 antibody [C44Mab-5] (ab264539)

CD44 Flow Cytometry staining using mouse Anti-CD44 antibody

Flow cytometric analysis of MDA-MB-231 (Human breast adenocarcinoma epithelial cell) cell line labeling CD44 (Red) using ab264539 at 1.055 µg/mL followed by Goat anti mouse IgG (Alexa Fluor® 488, ab150113) at 1/2000 dilution. Mouse monoclonal IgG was used as the isotype control (Black). Cells without incubation with primary antibody and secondary antibody (Blue).
Gated on viable cells.

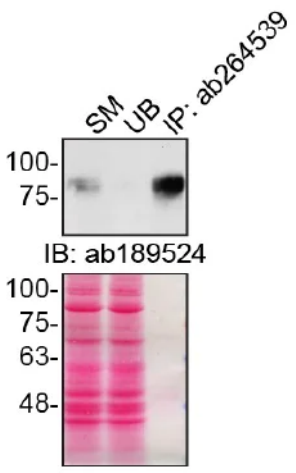


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD44 antibody [C44Mab-5] (ab264539)

CD44 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-CD44 antibody

Formalin-fixed, paraffin-embedded Human skin tissue stained for CD44 using ab264539 at 0.253 µg/mL followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) in immunohistochemical analysis. Counterstained with Hematoxylin. Membranous staining on human skin. The section was incubated with ab264539 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.

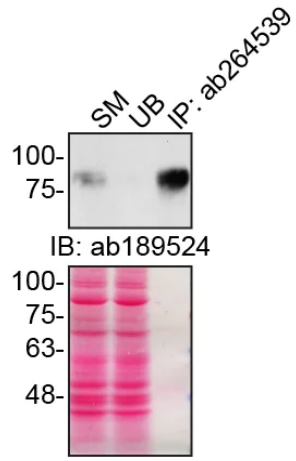
Secondary antibody only control: Used PBS instead of the primary antibody, secondary antibody was a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).



Immunoprecipitation - Anti-CD44 antibody [C44Mab-5] (ab264539)

Immunoprecipitation of CD44 in HAP1 cells. Lysates were prepared and immunoprecipitation was performed using 1.0 µg of ab264539 pre-coupled to prot.G-Sepharose beads. Samples were washed and processed for western blot with ab189524 at 1/2000. SM=10% starting material; UB=10% unbound fraction; IP=immunoprecipitate. These data were provided by YCharOS Inc., an open science company with the mission of characterizing commercially available antibody reagents for all human proteins. Abcam and YCharOS are working together to help address the reproducibility crisis by enabling the life science community to better evaluate commercially available antibodies.
All lanes:
Immunoprecipitation - Anti-CD44 antibody [C44Mab-5] (ab264539)

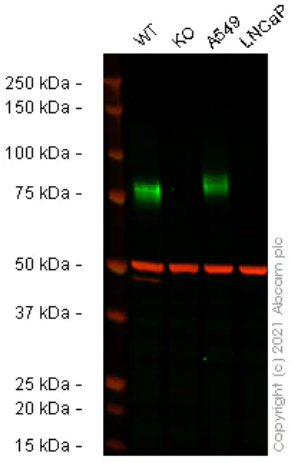
Predicted band size: 81 kDa



Immunoprecipitation - Anti-CD44 antibody [C44Mab-5] (ab264539)

Immunoprecipitation of CD44 in HAP1 cells. Lysates were prepared and immunoprecipitation was performed using 1.0 µg of ab264539 pre-coupled to prot.G-Sepharose beads. Samples were washed and processed for western blot with ab189524 at 1/2000. This data was kindly provided by the YCharOS Inc., an open science company with the mission of characterizing every commercially available antibody reagent. Abcam are working with YCharOS to support their mission of antibody characterisation using knock out cell lines.
All lanes:
Immunoprecipitation - Anti-CD44 antibody [C44Mab-5] (ab264539)

Predicted band size: 81 kDa



Western blot - Anti-CD44 antibody [C44Mab-5] (ab264539)

CD44 Western blot staining using mouse Anti-CD44 antibody

False colour image of Western blot: Anti-CD44 antibody [C44Mab-5] staining at 1.226 µg/ml, shown in green; Rabbit anti-alpha Tubulin antibody [EP1332Y] (ab52866) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab264539 was shown to bind specifically to CD44. A band was observed at 75-80 kDa in wild-type HeLa cell lysates with no signal observed at this size in CD44 knockout cell line ab262515 (knockout cell lysate ab263938). To generate this image, wild-type and CD44 knockout HeLa cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4°C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Mouse IgG H&L (IRDye® 800CW) preabsorbed (ab216772) and Goat anti-Rabbit IgG H&L (IRDye® 680RD) preabsorbed (ab216777) at 1/20000 dilution.
All lanes:
Western blot - Anti-CD44 antibody [C44Mab-5] (ab264539) at 1.226 µg/mL

Lane 1:
Wild-type HeLa cell lysate at 20 µg

Lane 2:

CD44 knockout HeLa cell lysate at 20 µg

Lane 2:
Western blot - Human CD44 knockout HeLa cell line (ab262515)

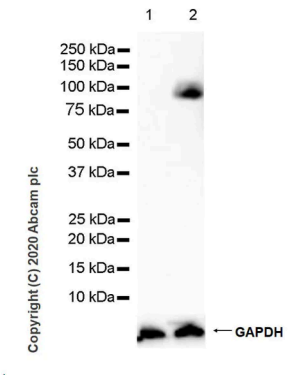
Lane 3:
A549 cell lysate at 20 µg

Lane 4:
LNCaP cell lysate at 20 µg

Performed under reducing conditions.

Predicted band size: 81 kDa

Observed band size: 75-80 kDa



Western blot - Anti-CD44 antibody [C44Mab-5] (ab264539)

CD44 Western blot staining using mouse Anti-CD44 antibody

Blocking/diluting buffer and concentration: 5% NFDM/TBST.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab264539).

All lanes:
Western blot - Anti-CD44 antibody [C44Mab-5] (ab264539) at 1.226 µg/mL

Lane 1:
MCF7 (human breast adenocarcinoma epithelial cell), whole cell lysate at 20 µg

Lane 2:
MDA-MB-231 (human breast adenocarcinoma epithelial cell), whole cell lysate at 20 µg

Secondary

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

Predicted band size: 81 kDa

Observed band size: 82 kDa

Exposure time: 70s

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