abcam

ab264546

Anti-CD44 antibody [C44Mab-5] - BSA and Azide free

Recombinant | KO Validated

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	C44Mab-5
Purification technique	Affinity purification Protein A
Light chain type	kappa
Concentration	1.008 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	-
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	-

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 conditions	+4°C

Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab264546 is the carrier-free version of ab264539.
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

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.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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

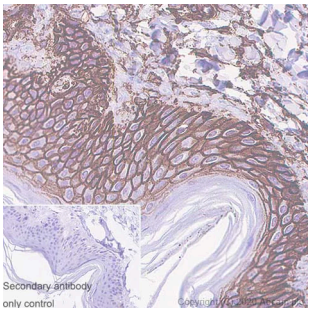
We do not recommend this combination. It is not covered by our product promise.

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

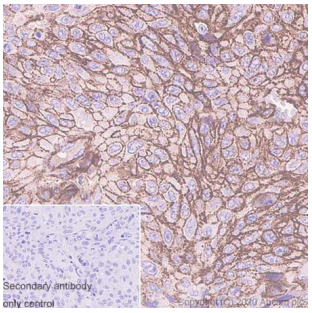


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD44 antibody [C44Mab-5] - BSA and Azide free (ab264546)

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).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab264539).

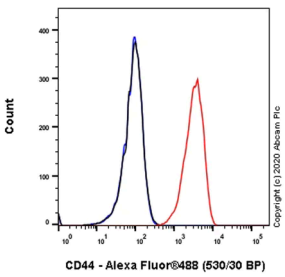


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD44 antibody [C44Mab-5] - BSA and Azide free (ab264546)

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).

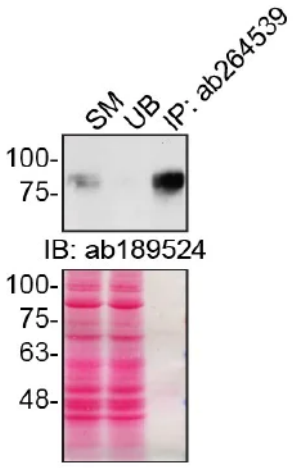
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab264539).



Flow Cytometry - Anti-CD44 antibody [C44Mab-5] - BSA and Azide free (ab264546)

CD44 Flow Cytometry staining using mouse Anti-CD44 antibody

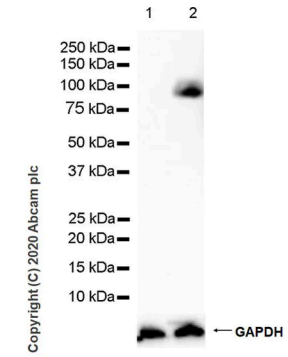
Flow cytometric analysis of MDA-MB-231 (Human breast adenocarcinoma epithelial cell) cell line labeling CD44 (Red) using ab264539 at 1.055 µg/mL followed by Goat anti mouse IgG (Alexa Fluor® 488, ab150113) at 1/2000 dilution. Mouse monoclonal IgG was used as the isotype control (Black). Cell without incubation with primary antibody and secondary antibody (Blue). Gated ov viable cells.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab264539).



Immunoprecipitation - Anti-CD44 antibody [C44Mab-5] - BSA and Azide free (ab264546)

This data was developed using the same antibody clone in a different buffer formulation (ab264546). 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



Western blot - Anti-CD44 antibody [C44Mab-5] - BSA and Azide free (ab264546)

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

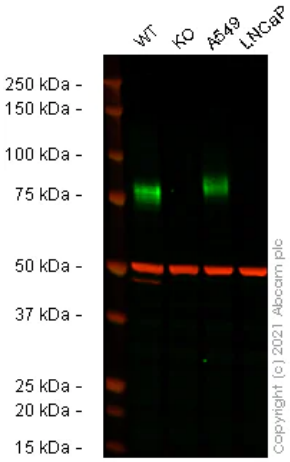
Secondary

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



Western blot - Anti-CD44 antibody [C44Mab-5] - BSA and Azide free (ab264546)

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 Â°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

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