abcam

ab7754

Anti-Cytokeratin 19 antibody [A53-B/A2] - Cytoskeleton Marker

Anti-Cytokeratin 19 antibody [A53-B/A2] - Cytoskeleton Marker (ab7754) is a mouse monoclonal antibody detecting Cytokeratin 19 in **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF**. Suitable for **Human**.

- KO validated for confirmed specificity
- Over 50 publications
- Trusted since 2001

Lab Essentials | KO Validated

Key facts

Isotype	IgG2a
Host species	Mouse
Storage buffer	pH: 7.4 Preservative: 0.097% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing KRT19 protein. The exact immunogen used to generate this antibody is proprietary information. Database link P08727
Clone number	A53-B/A2
Purification technique	Affinity purification Protein A
Specificity	Rod domain of cytokeratin peptide 19 (40 kDa) in human tissue.
Epitope	Rod domain of cytokeratin peptide 19.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1-2 µg/mL
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	Signal can be observed in cells fixed with either methanol or paraformaldehyde.

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/1 - 1/5
Notes	ab170191 - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

IHC-P

Tested

Species	Human
Dilution info	5-10 µg/mL
Notes	Perform enzymatic antigen retrieval before commencing with IHC staining protocol.

Target data

See full target information KRT19

Function	Involved in the organization of myofibers. Together with KRT8, helps to link the contractile apparatus to dystrophin at the costameres of striated muscle.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Aliquoting information	Upon delivery aliquot
Storage information	Do Not Freeze

Notes

What is this antibody validated in?
Anti-Cytokeratin 19 antibody [A53-B/A2] - Cytoskeleton Marker (ab7754) is a mouse monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Human samples.

What is the molecular weight of Cytokeratin 19?
Anti-Cytokeratin 19 [A53-B/A2] - Cytoskeleton Marker (ab7754) specifically detects a band for Cytokeratin 19 (UniProt: P08727) at a molecular weight of 44kDa.

Trusted by the scientific community
Anti-Cytokeratin 19 [A53-B/A2] - Cytoskeleton Marker (ab7754) was first used in a scientific publication in 2001 and has been cited over 50 times in peer-reviewed journals.

Reviewed by scientists
Anti-Cytokeratin 19 [A53-B/A2] - Cytoskeleton Marker (ab7754) has over 5 independent reviews from customers.

Specificity confirmed
The specificity of Anti-Cytokeratin 19 antibody [A53-B/A2] - Cytoskeleton Marker (ab7754) has been confirmed by Immunocytochemistry testing in Cytokeratin 19 Knockout MCF7 cells.

Other related products
We have a range of other formats of antibody clone [A53-B/A2] also available for your convenience: ab7754, FITC - ab178543

Supplementary info

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

Activity summary	Cytokeratin 19 (CK19) also known as cytokeratine 19 keratin 19 (KRT19) or CK19 is a type of intermediate filament found in epithelial cells. It serves as an essential component of the cytoskeleton. CK19 weighs approximately 40 kDa and is broadly expressed in simple epithelial tissues including liver intestine and various glandular epithelial cells. As a cytokeratin marker it often appears in combination with others like cytokeratin 17 in certain tissue types helping to maintain the structural integrity of cells.
Biological function summary	CK19 plays a role in maintaining the cytoskeletal framework that provides mechanical support and helps control cell size and shape. It is not part of a large protein complex but works closely with other cytokeratins to ensure the stability and resilience of epithelial tissues. The A53-B/A22.26 positive staining is often used to confirm its presence in clinical histopathology.
Pathways	CK19 connects to cellular processes especially involving the keratinization and epithelial cell differentiation pathways. It interacts with other cytokeratins including BA16 and KR17 to facilitate these processes. This interaction aids in modulating the dynamics of cytoskeletal rearrangement during cell movement division and differentiation.
Associated diseases and disorders	CK19 overexpression is linked with certain cancers notably hepatocellular carcinoma and breast cancer. It can serve as a prognostic marker in these diseases often in conjunction with other markers like CK17. The involvement of CK19 in the epithelial-mesenchymal transition (EMT) process connects it to the progression and aggressiveness of tumors facilitated by interactions with proteins involved in EMT pathways.

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

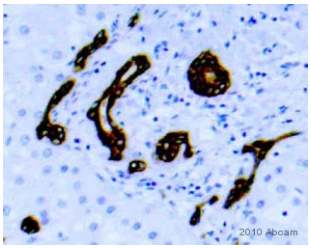
We do not recommend this combination. It is not covered by our product promise.

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.

8 product images

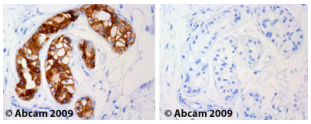


This image is courtesy of an anonymous customer review

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 19 antibody [A53-B/A2] - Cytoskeleton Marker (ab7754)

Cytokeratin 19 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-Cytokeratin 19 antibody

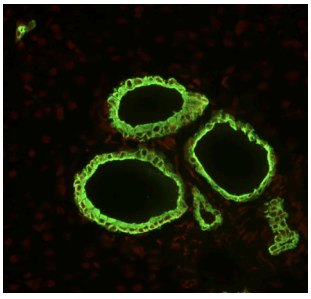
ab7754 staining Cytokeratin 19 in Human liver tissue sections by Immunohistochemistry (IHC-P - formaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 5% milk for 30 minutes at 37°C; antigen retrieval was by heat mediation in citrate buffer. Samples were incubated with primary antibody (1/1000 in antibody diluent) for 1 hour at 37°C. An undiluted HRP-conjugated goat anti-rabbit IgG polyclonal was used as the secondary antibody.



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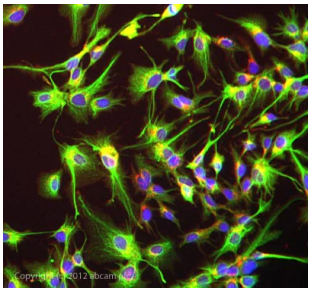
ab7754 staining Cytokeratin 19 in human skin.
Left panel: with primary antibody at 2 ug/ml. Right panel: isotype control.
Sections were stained using an automated system (DAKO Autostainer Plus), at room temperature: sections were rehydrated and antigen retrieved with the Dako 3 in 1 AR buffers citrate pH6.1. Slides were peroxidase blocked in 3% H2O2 in methanol for 10 mins. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS) then incubated with primary antibody for 20 min and detected with Dako envision flex amplification kit for 30 minutes. Colorimetric detection was completed with Diaminobenzidine for 5 minutes. Slides were counterstained with Haematoxylin and coverslipped under DePeX. Please note that for manual staining we recommend to optimize the primary antibody concentration and incubation time (overnight incubation), and amplification may be required.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 19 antibody [A53-B/A2] - Cytoskeleton Marker (ab7754)

Cytokeratin 19 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-Cytokeratin 19 antibody

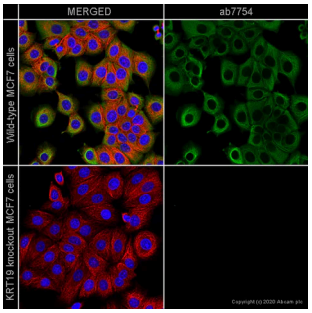
Immunohistochemical analysis of paraffin-embedded human liver tissue stained for Cytokeratin 19 using ab7754 at a 1/100 dilution followed by a GAM IgG-Alexa Fluor®488 diluted at 1/200 (green). Cell nuclei stained with PI (1 µg/ml; orange).



Immunocytochemistry/ Immunofluorescence - Anti-Cytokeratin 19 antibody [A53-B/A2] - Cytoskeleton Marker (ab7754)

Cytokeratin 19 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-Cytokeratin 19 antibody

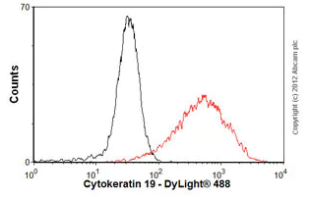
ICC/IF image of ab7754 stained HepG2 cells. The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody ab7754 at 5µg/ml overnight at +4°C. The secondary antibody (green) was DyLight® 488 goat anti- mouse (ab96879) IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.



Immunocytochemistry - Anti-Cytokeratin 19 antibody [A53-B/A2] - Cytoskeleton Marker (ab7754)

Cytokeratin 19 Immunocytochemistry staining using mouse Anti-Cytokeratin 19 antibody

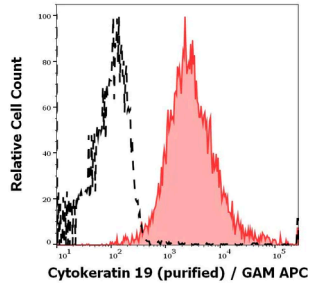
ab7754 staining Cytokeratin 19 in wild-type MCF7 cells (top panel) and KRT19 knockout MCF7 cells (bottom panel). The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab7754 at 1/500 dilution and ab6046 (Rabbit polyclonal to beta 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 red). Nuclear DNA was labelled in blue with DAPI.
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



Flow Cytometry (Intracellular) - Anti-Cytokeratin 19 antibody [A53-B/A2] - Cytoskeleton Marker (ab7754)

Cytokeratin 19 Flow Cytometry (Intracellular) staining using mouse Anti-Cytokeratin 19 antibody

Overlay histogram showing MCF7 cells stained with ab7754 (red line). The cells were fixed with 80% methanol (5 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 (ab7754, 0.5µg/1x10^6 cells) 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 IgG2a [ICIGG2A] (ab91361, 1µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.



Flow Cytometry (Intracellular) - Anti-Cytokeratin 19 antibody [A53-B/A2] - Cytoskeleton Marker (ab7754)

Separation of MCF-7 cells (red-filled) from human leukocytes (black-dashed) in flow cytometry analysis (intracellular staining) of peripheral whole blood spiked with MCF-7 cells stained using ab7754 (concentration in sample 3 µg/ml, GAM APC).

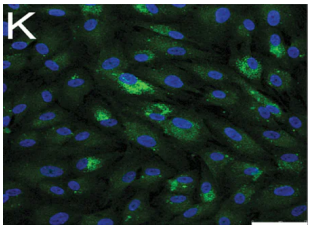


Image from Ferro F et al., PLoS One. 2012;7(7):e41774. Epub 2012 Jul 23. Fig 3.; doi:10.1371/journal.pone.0041774; July 23, 2012, PLoS ONE 7(7): e41774.

Immunocytochemistry/ Immunofluorescence - Anti-Cytokeratin 19 antibody [A53-B/A2] - Cytoskeleton Marker (ab7754)

Immunofluorescence analysis of 1 month hepato-differentiated Human dental pulp stem cells, staining Cytokeratin 19 with ab7754 at 1/60 dilution. A FITC-conjugated anti-mouse IgG was used as the secondary antibody.

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