

Product datasheet

Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker ab181598

KO VALIDATED Recombinant RabMAB

★★★★★ [10 Abreviews](#) [91 References](#) [14 Images](#)

Overview

Product name	Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker
Description	Rabbit monoclonal [EPR17078] to Cytokeratin 7 - Cytoskeleton Marker
Host species	Rabbit
Tested applications	Suitable for: IHC-Fr, WB, IHC-P, ICC/IF, Flow Cyt (Intra)
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Rat bladder and kidney, mouse lung, kidney and liver tissue lysates and HeLa cell lysate. IHC-P: Human mammary gland, mouse liver and rat liver tissue. IHC-F: Mouse kidney tissue. ICC/IF: A549 cells. Flow Cyt (intra): A549 cells.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none">- High batch-to-batch consistency and reproducibility- Improved sensitivity and specificity- Long-term security of supply- Animal-free production <p>For more information see here.</p> <p>Our RabMAB[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAB[®] patents.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR17078

Isotype

IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab181598 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-Fr	★★★★★ (2)	1/8000.
WB		1/1000. Detects a band of approximately 51, 45, 42 kDa (predicted molecular weight: 51 kDa).
IHC-P	★★★★★ (8)	1/8000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
ICC/IF		1/100.
Flow Cyt (Intra)		1/1500.

Target

Function

Blocks interferon-dependent interphase and stimulates DNA synthesis in cells. Involved in the translational regulation of the human papillomavirus type 16 E7 mRNA (HPV16 E7).

Tissue specificity

Expressed in cultured epidermal, bronchial and mesothelial cells but absent in colon, ectocervix and liver. Observed throughout the glandular cells in the junction between stomach and esophagus but is absent in the esophagus.

Sequence similarities

Belongs to the intermediate filament family.

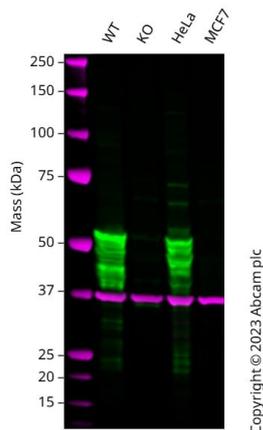
Post-translational modifications

Arg-20 is dimethylated, probably to asymmetric dimethylarginine.

Cellular localization

Cytoplasm.

Images



Western blot - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)

All lanes : Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598) at 1000 µg

Lane 1 : Wild-type A549 cell lysate

Lane 2 : KRT7 knockout A549 cell lysate

Lane 3 : HeLa cell lysate

Lane 4 : MCF7 cell lysate

Lysates/proteins at 20 µg per lane.

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 51 kDa

Observed band size: 40-55 kDa

Western blot: Anti-KRT7 antibody [EPR17078] (ab181598) staining at 1/1000 dilution, shown in green; Mouse anti-GAPDH antibody [6C5] (**ab8245**) loading control staining at 1/20000 dilution, shown in magenta. In Western blot, ab181598 was shown to bind specifically to KRT7. A band was observed at 40-55 kDa in wild-type A549 cell lysates with no signal observed at this size in KRT7 knockout cell line. To generate this image, wild-type and KRT7 knockout A549 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-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L

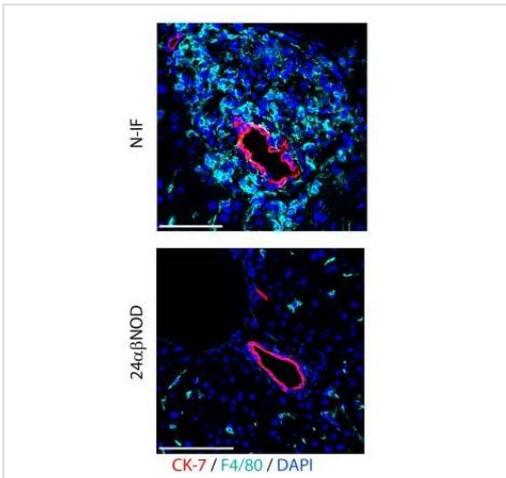
680RD at 1/20000 dilution.

Hepatic inflammation and abnormal intrahepatic bile ducts in the N-IF mouse

Immunofluorescence staining of bile ducts (CK-7, red), macrophages (F4/80, light blue) and nuclei (DAPI, blue) in livers of 8 week old N-IF and 24 α β NOD control mice. Representative images from two independent experiments with a total of six mice are shown. Scale bars are 100 μ m.

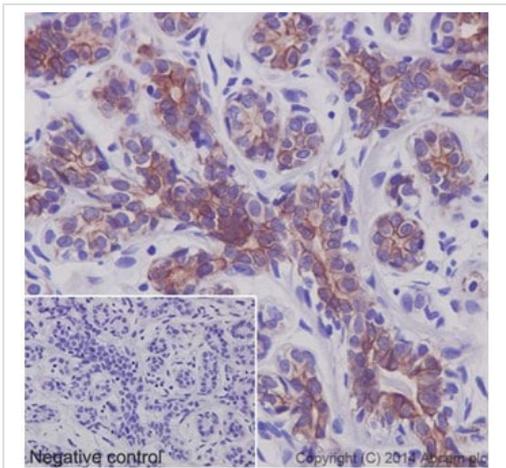
Cytokeratin is detected with ab181598 at 1/1500 dilution in formalin-fixed, paraffin-embedded mouse liver tissue. The secondary antibody is an Anti-Rabbit AlexaFluor[®]594 conjugate (red).

(From Figure 1D of Fransen-Pettersson, N. et al)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)

Fransen-Pettersson, N. et al PLoS One. 2016 Jul 21;11(7):e0159850. doi: 10.1371/journal.pone.0159850. eCollection 2016
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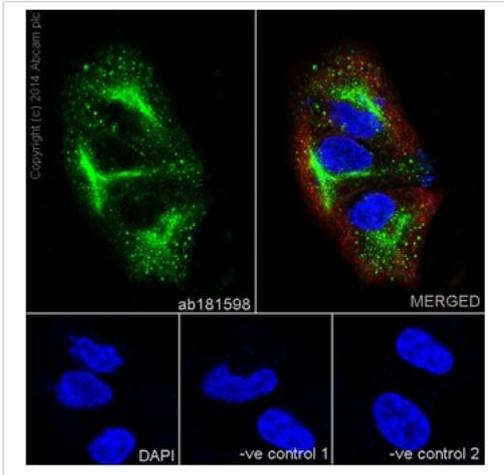


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)

Immunohistochemical analysis of paraffin-embedded Human mammary gland tissue labeling Cytokeratin 7 with ab181598 at 1/8000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) **ab97051** at 1/500 dilution. Membrane and cytoplasmic staining on epithelial cells of breast tissues is observed. Counter stained with Hematoxylin.

Negative control: Using PBS instead of primary antibody.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

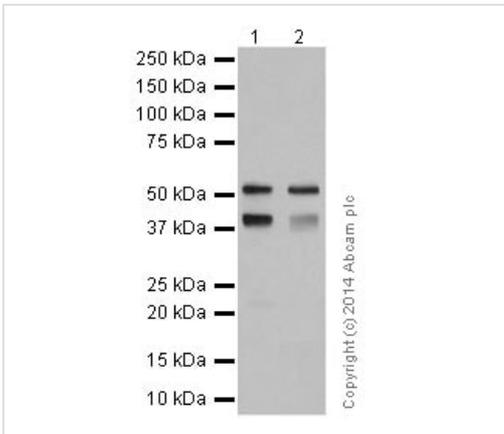


Immunocytochemistry/ Immunofluorescence - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 A549 (Human lung carcinoma) cells labeling Cytokeratin 7 with ab181598 at 1/100 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/400 dilution (green). Cytoplasmic staining on A549 cell line is observed. The nuclear counter stain is DAPI (blue). Tubulin is detected with **ab7291** (anti-Tubulin mouse mAb) at 1/500 dilution and **ab150120** (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution (red).

The negative controls are as follows;

1. ab181598 at 1/100 dilution followed by **ab150120** (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution.
2. **ab7291** (anti-Tubulin mouse mAb) at 1/500 dilution followed by **ab150077** (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/400 dilution.



Western blot - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)

All lanes : Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598) at 1/50000 dilution

Lane 1 : Rat bladder tissue

Lane 2 : Mouse lung tissue

Lysates/proteins at 10 µg per lane.

Secondary

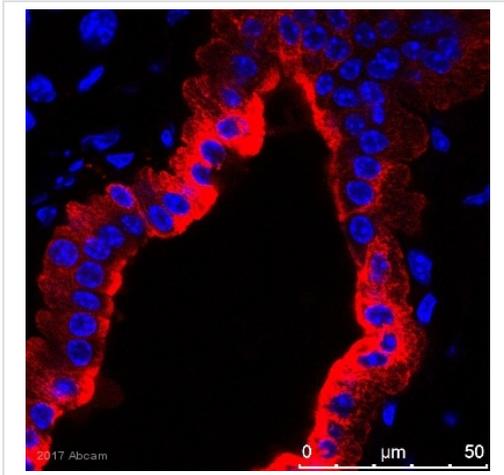
All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 51 kDa

Observed band size: 52, 42 kDa

Blocking/Dilution buffer: 5% NFDm/TBST.

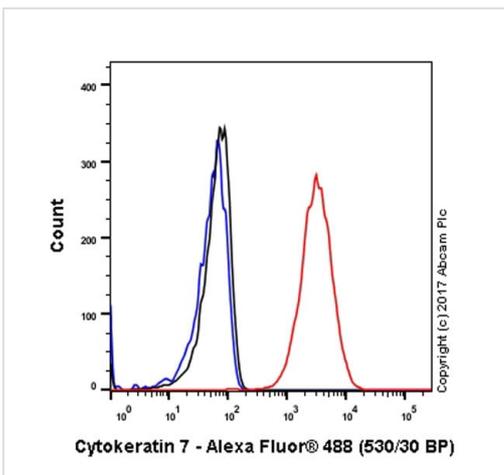
~45 and 42kDa bands are supported by the literature and competitor's products, which may be the isoforms.



Immunohistochemistry (Frozen sections) - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)

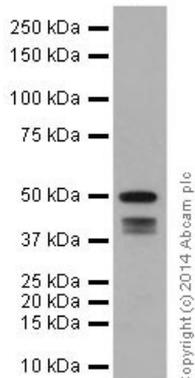
Image courtesy of Dr. Isabelle Mletich

Immunohistochemical analysis of formaldehyde-fixed, frozen section of mouse salivary gland tissue labeling Cytokeratin 7 with ab181598 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG AlexaFluor®660.



Flow Cytometry (Intracellular) - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)

Intracellular Flow Cytometry analysis of A549 (human lung carcinoma) cells labeling Cytokeratin 7 (red) with ab181598 at a 1/1500 dilution. Cells were fixed with 4% paraformaldehyde and permeabilized with 90% methanol. A goat anti-rabbit IgG (Alexa Fluor® 488) ([ab150077](#)) was used as the secondary antibody at a 1/2000 dilution. Black - Rabbit monoclonal IgG ([ab172730](#)). Blue (unlabeled control) - Cells without incubation with primary and secondary antibodies.



Western blot - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)

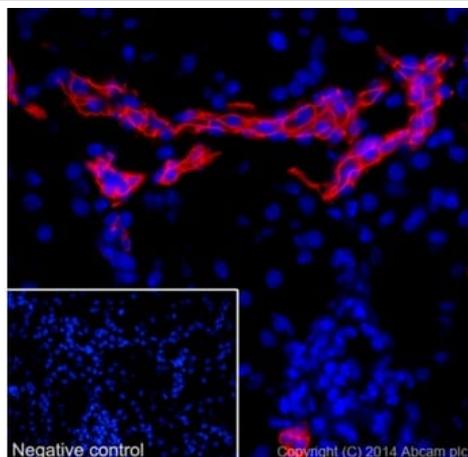
Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598) at 1/1000 dilution + Mouse liver lysate at 10 µg

Secondary

Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 51 kDa

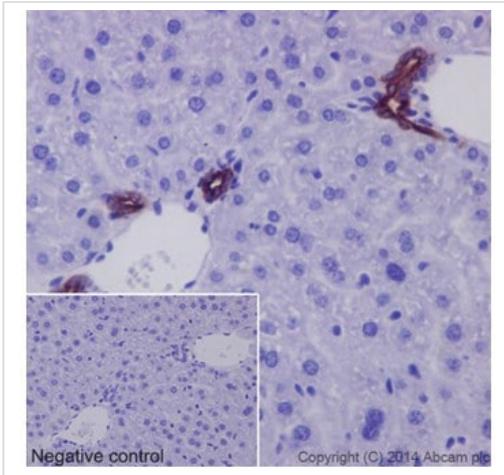
~45 and 42kDa bands are supported by the literature and competitor's products, which may be the isoforms.



Immunohistochemistry (Frozen sections) - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)

Immunohistochemical analysis of frozen Mouse kidney tissue labeling Cytokeratin 7 with ab181598 at 1/8000 dilution, followed by Donkey anti-rabbit Alexa Fluor 594 at 1/1000 dilution. Cytoplasmic staining on collecting tube is observed. This data is from our collaborator Dr. Hai Song's lab (Life Sciences Institute Zhejiang University). Counter stained with DAPI.

Negative control: Using PBS instead of primary antibody.



Immunohistochemical analysis of paraffin-embedded Mouse liver tissue labeling Cytokeratin 7 with ab181598 at 1/8000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) **ab97051** at 1/500 dilution. On mouse liver, only bile duct epithelia are positive, no reaction in hepatocytes is observed. Counter stained with Hematoxylin.

Negative control: Using PBS instead of primary antibody.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)



All lanes : Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598) at 1/20000 dilution

Lane 1 : HeLa (Human epithelial cells from cervix adenocarcinoma) cell lysate at 20 µg

Lane 2 : Rat kidney tissue lysate at 10 µg

Secondary

All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

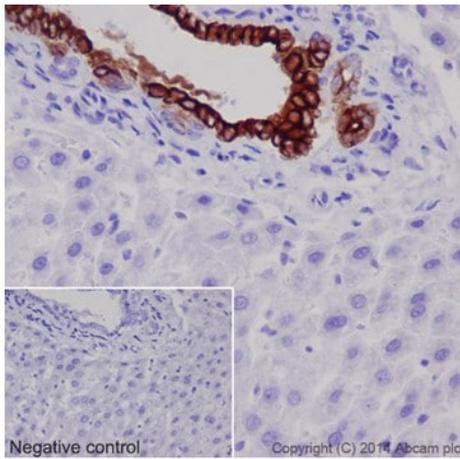
Western blot - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)

Predicted band size: 51 kDa

Observed band size: 51, 45, 42 kDa

Blocking/Dilution buffer: 5% NFDm/TBST.

~45 and 42kDa bands are supported by the literature and competitor's products, which may be the isoforms.

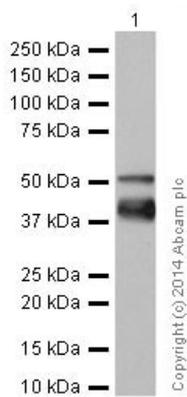


Immunohistochemical analysis of paraffin-embedded Rat liver tissue labeling Cytokeratin 7 with ab181598 at 1/8000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) **ab97051** at 1/500 dilution. On rat liver, only bile duct epithelia are positive, no reaction in hepatocytes is observed. Counter stained with Hematoxylin.

Negative control: Using PBS instead of primary antibody.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)



Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598) at 1/5000 dilution + Mouse kidney lysate at 10 µg

Secondary

Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 51 kDa

Observed band size: 51, 45, 42 kDa

Western blot - Anti-Cytokeratin 7 antibody [EPR17078] - Cytoskeleton Marker (ab181598)

~45 and 42kDa bands are supported by the literature and competitor's products, which may be the isoforms.

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-Cytokeratin 7 antibody [EPR17078] -
Cytoskeleton Marker (ab181598)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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