abcam

ab76126

Anti-Cytokeratin 20 antibody [EPR1622Y] - Cytoskeleton Marker

Anti-Cytokeratin 20 antibody [EPR1622Y] - Cytoskeleton Marker (ab76126) is a rabbit monoclonal antibody detecting Cytokeratin 20 in **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF**. Suitable for **Human**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 50 publications
- Trusted since 2009

Lab Essentials | Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 50% Tissue culture supernatant, 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	EPR1622Y
Purification technique	Affinity purification Protein A
Specificity	The immunogen of this antibody is 73% homolog with Mouse-Cytokeratin 20. This antibody gives positive results for mouse samples in Western Blot only. Therefore we do not recommend this antibody for mouse samples and do not cover mouse with our Abpromise guarantee.
Dissociation constant	3.1×10^{-11} M
Concentration	0.112 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/100 - 1/250
Notes	Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

Predicted

Species	Rat, Goat, Pig, Common marmoset
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/10000 - 1/50000
Notes	-

Predicted

Species	Rat, Goat, Pig, Common marmoset
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human

Dilution info	1/100 - 1/500
Notes	-

Predicted

Species	Rat, Goat, Pig, Common marmoset
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/1000
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Rat, Goat, Pig, Common marmoset
Dilution info	-
Notes	-

Target data

See full target information KRT20

Function	Plays a significant role in maintaining keratin filament organization in intestinal epithelia. When phosphorylated, plays a role in the secretion of mucin in the small intestine (By similarity).

Storage

Shipped at conditions	Conditional Ambient
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 is this antibody validated in?
Anti-Cytokeratin 20 antibody [EPR1622Y] - Cytoskeleton Marker (ab76126) is a rabbit recombinant 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 20?
Anti-Cytokeratin 20 [EPR1622Y] - Cytoskeleton Marker (ab76126) specifically detects a band for Cytokeratin 20 (UniProt: P35900) at a molecular weight of 48kDa.

Trusted by the scientific community
Anti-Cytokeratin 20 [EPR1622Y] - Cytoskeleton Marker (ab76126) was first used in a scientific publication in 2009 and has been cited over 50 times in peer-reviewed journals.

Reviewed by scientists
Anti-Cytokeratin 20 [EPR1622Y] - Cytoskeleton Marker (ab76126) has over 15 independent reviews from customers.

Other related products
We have a range of other formats of antibody clone [EPR1622Y] also available for your convenience: ab76126, PE - ab209923, Carrier free - ab219589, Alexa Fluor® 488 - ab275988, Alexa Fluor® 647 - ab279694, Alexa Fluor® 555 - ab280839, Alexa Fluor® 594 - ab303597

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

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.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

Supplementary info

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

Activity summary	Cytokeratin 20 often known as CK20 KRT20 or keratin 20 is a type of intermediate filament protein that is highly specific to epithelial cells. This cytoskeletal protein has a molecular weight of approximately 46.5 kDa. Cytokeratin 20 is primarily found in the gastric and intestinal epithelium urothelium and Merkel cells. Its function as part of the cytoskeleton provides structural integrity and strength to cells maintaining their shape and resilience against mechanical stress.
Biological function summary	Cytokeratin 20 is essential in cellular differentiation and maintenance within epithelial tissues. It plays an important role in the structural framework of epithelial cells by integrating into the cytoskeletal network which includes other keratins. Typically cytokeratin 20 forms heterodimers with keratin 8 contributing to the assembly of intermediate filaments. These interactions maintain cell stability and are involved in cellular processes such as migration and proliferation.
Pathways	Cytokeratin 20 participates in the framework of intermediate filament signaling influencing cell motility and secretion in epithelial tissues. It contributes mainly to the keratinization pathway which is critical in forming a protective barrier in epithelial cells. Additionally it is related to cell adhesion and signalling pathways that are important for tissue integrity. Connections with keratin 8 and other cytoskeletal proteins facilitate signal transduction processes necessary for epithelial homeostasis and response to injury.
Associated diseases and disorders	Cytokeratin 20 serves as a valuable marker for identifying specific cancer types particularly colorectal adenocarcinomas and Merkel cell carcinoma. The presence of cytokeratin 20 is often used in immunohistochemistry for cancer diagnosis and prognosis. Its expression pattern is notably distinct helping differentiate between various adenocarcinomas. In colorectal cancer it shows a unique interaction with proteins like keratin 8 supporting the tumor's structural environment and influencing tumorigenesis and metastasis processes.

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

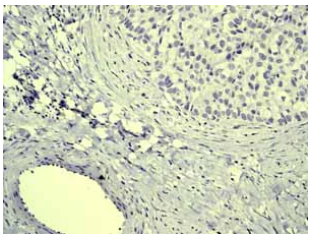
We do not recommend this combination. It is not covered by our product promise.

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.

13 product images

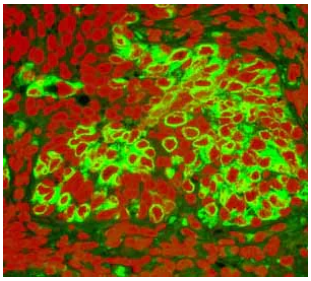


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 20 antibody [EPR1622Y] - Cytoskeleton Marker (ab76126)

Cytokeratin 20 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cytokeratin 20 antibody

ab76126 showing **negative staining** in human breast carcinoma tissue.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

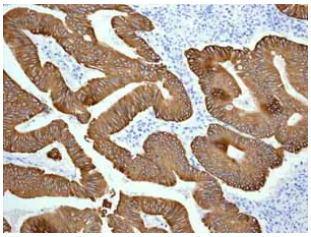


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 20 antibody [EPR1622Y] - Cytoskeleton Marker (ab76126)

Cytokeratin 20 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cytokeratin 20 antibody

Fluorescent immunohistochemical analysis of paraffin-embedded human colonic adenocarcinoma tissue using ab76126. Green-CK20 red-PI

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

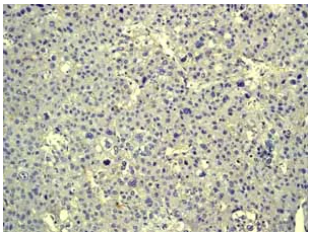


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 20 antibody [EPR1622Y] - Cytoskeleton Marker (ab76126)

Cytokeratin 20 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cytokeratin 20 antibody

ab76126 showing positive staining in human colonic adenocarcinoma tissue.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

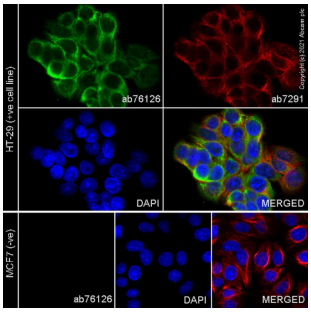


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 20 antibody [EPR1622Y] - Cytoskeleton Marker (ab76126)

Cytokeratin 20 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cytokeratin 20 antibody

ab76126 showing **negative staining** in human hepatocellular carcinoma tissue.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

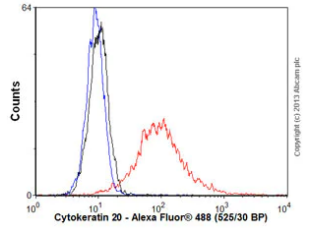


Immunocytochemistry/ Immunofluorescence - Anti-Cytokeratin 20 antibody [EPR1622Y] - Cytoskeleton Marker (ab76126)

Cytokeratin 20 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Cytokeratin 20 antibody

ab76126 staining Cytokeratin 20 in HT-29 cells, with negative expression in MCF7 cells. The cells were fixed with 100% methanol (5 min), permeabilised 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 overnight at +4°C with ab76126 at 0.1 µg/ml and ab7291, Mouse monoclonal [DM1A] to alpha Tubulin at 0.5 µg/ml. Cells were then incubated with ab150081, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 488), pre-adsorbed at 1/1000 dilution (shown in green) and ab150119, Goat polyclonal Secondary Antibody to Mouse IgG - H&L (Alexa Fluor® 647), pre-adsorbed at 1/1000 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue).
Image was acquired with a confocal microscope (Leica-Microsystems TCS SP8) and a single confocal section is shown.

This product also work with 4% formaldehyde (10 min) fixation under the same testing conditions.



Flow Cytometry (Intracellular) - Anti-Cytokeratin 20 antibody [EPR1622Y] - Cytoskeleton Marker (ab76126)

Cytokeratin 20 Flow Cytometry (Intracellular) staining using rabbit Anti-Cytokeratin 20 antibody

Overlay histogram showing LoVo (Human colorectal adenocarcinoma cell line) cells stained with ab76126 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Triton X-100 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 (ab76126, 1/1000 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.

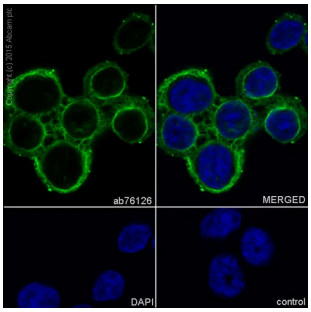


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 20 antibody [EPR1622Y] - Cytoskeleton Marker (ab76126)

Cytokeratin 20 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cytokeratin 20 antibody

ab76126 showing positive staining in human urinary bladder transitional carcinoma tissue.

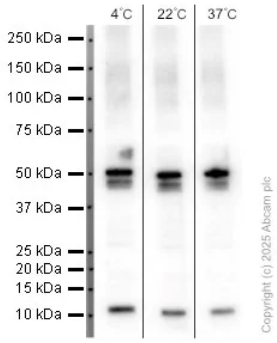
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-Cytokeratin 20 antibody [EPR1622Y] - Cytoskeleton Marker (ab76126)

Cytokeratin 20 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Cytokeratin 20 antibody

Immunocytochemistry/Immunofluorescence analysis of HT-29 (human colorectal adenocarcinoma) cells labelling Cytokeratin 20 with purified ab76126 at 1/500. Cells were fixed with 100% methanol. ab150077, Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody. Nuclei were counterstained with DAPI (blue).
Secondary Only Control: PBS was used instead of the primary antibody as the negative control.



Western blot - Anti-Cytokeratin 20 antibody [EPR1622Y] - Cytoskeleton Marker (ab76126)

Cytokeratin 20 Western blot staining of Human small intestine lysate using rabbit Anti-Cytokeratin 20 antibody

This blot was produced using 4-20% SDS-PAGE containing 15 µg of human small intestine lysate per lane at 150V for 1hr before being transferred onto a 0.45 µm PVDF membrane at 75V for 1hr. The membrane was then blocked for 1hr using 5% NFDM/TBST, then incubated with ab76126 (1/10,000) at room temperature for 1hr. After being washed three times in TBST, the membrane was incubated with Peroxidase conjugated goat anti-rabbit IgG with minimal cross-reactivity with human IgG at 1/2000 dilution for 1hr at room temperature. The membrane was washed three times again. Then the signal was developed using the ECL technique.

ab76126 was stored at a range of temperatures (+4°C, +22°C, +37°C) for 1 week before being tested in WB. The image shows the band intensity remains relatively constant for temperatures ranging between 4°C, 22°C and 37°C, demonstrating that antibody activity is not affected under these conditions. This data was generated as part of a structured antibody stability study supporting Abcam’ s transition from cold⊠chain to ambient shipping.

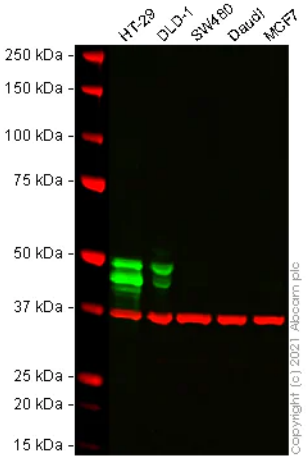
All lanes:
Western blot - Anti-Cytokeratin 20 antibody [EPR1622Y] - Cytoskeleton Marker (ab76126) at 1/10000 dilution

All lanes:
Human small intestine lysate at 15 µg with NDFM/TBST

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/2000 dilution

Exposure time: 10s



Western blot - Anti-Cytokeratin 20 antibody [EPR1622Y] - Cytoskeleton Marker (ab76126)

Cytokeratin 20 Western blot staining using rabbit Anti-Cytokeratin 20 antibody

False colour image of Western blot: Anti-Cytokeratin 20 antibody [EPR1622Y] - Cytoskeleton Marker staining at 1/10000 dilution, shown in green; Mouse anti-GAPDH antibody [6C5] (ab8245) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab76126 was shown to bind specifically to Cytokeratin 20. 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 (IRDye® 800CW) preabsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (ab216776) at 1/20000 dilution.
All lanes:
Western blot - Anti-Cytokeratin 20 antibody [EPR1622Y] - Cytoskeleton Marker (ab76126) at 1/10000 dilution

Lane 1:
HT-29 cell lysate at 20 µg

Lane 2:
DLD-1 cell lysate at 20 µg

Lane 3:
SW480 cell lysate at 20 µg

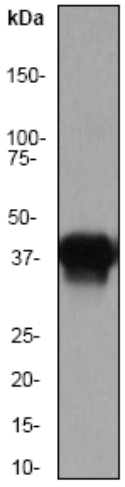
Lane 4:
Daudi cell lysate at 20 µg

Lane 5:
MCF7 cell lysate at 20 µg

Performed under reducing conditions.

Predicted band size: 48 kDa

Observed band size: 45 kDa, 45-50 kDa



Western blot - Anti-Cytokeratin 20 antibody [EPR1622Y] - Cytoskeleton Marker (ab76126)

Cytokeratin 20 Western blot staining of human small intestine lysate using rabbit Anti-Cytokeratin 20 antibody

Primary: ab76126, 1/50000 dilution
Sample: human small intestine lysate, 10 ug
Secondary: goat anti-rabbit-HRP, 1/1000 dilution
All lanes:
Western blot - Anti-Cytokeratin 20 antibody [EPR1622Y] - Cytoskeleton Marker (ab76126) at 1/50000 dilution

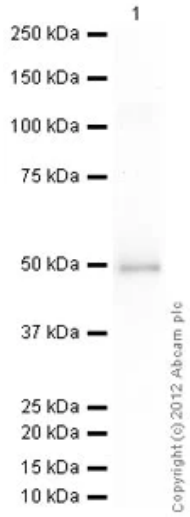
All lanes:
human small intestine lysate at 10 µg

Secondary

All lanes:
goat anti-rabbit-HRP at 1/1000 dilution

Predicted band size: 48 kDa

Observed band size: 44 kDa



Western blot - Anti-Cytokeratin 20 antibody [EPR1622Y] - Cytoskeleton Marker (ab76126)

Primary: ab76126, 1/50000 dilution
Sample: ab73640, 0.01 ug
Secondary: ab97080, 1/5000 dilution
All lanes:
Western blot - Anti-Cytokeratin 20 antibody [EPR1622Y] - Cytoskeleton Marker (ab76126) at 1/50000 dilution

All lanes:
Recombinant Human Cytokeratin 20 protein (ab73640) at 0.01 µg

Secondary

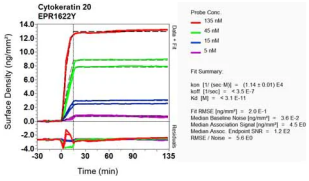
All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 48 kDa

Exposure time: 20s



OI-RD Scanning - Anti-Cytokeratin 20 antibody [EPR1622Y] - Cytoskeleton Marker (ab76126)

We have systematically measured KD (the equilibrium dissociation constant between the antibody and its antigen), of more than 840 recombinant antibodies to assess not only their individual KD values but also to see the average affinity of antibody. Based on the comparison with published literature values for mouse monoclonal antibodies, Recombinant antibodies appear to be on average 1-2 order of magnitude higher affinity.

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