abcam

ab236435

Anti-Cytokeratin 20 antibody [SP33] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
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	SP33
Purification technique	Affinity purification Protein A/G
Concentration	1.01 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from TCS by protein A/G.

Reactivity data

IHC-P

Tested

Species	Human, Rat

Dilution info	-
Notes	-

Predicted

Species	Mouse, Cow, Dog
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Mouse, Cow, Dog
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Mouse, Cow, Dog
Dilution info	-
Notes	-

IHC-Fr

Tested

Species	Rat
Dilution info	-
Notes	-

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Mouse, Cow, Dog
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	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab236435 is the carrier-free version of ab64090.
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.

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.

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

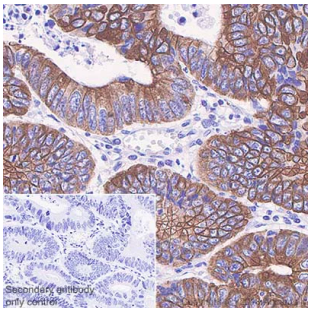
We do not recommend this combination. It is not covered by our product promise.

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.

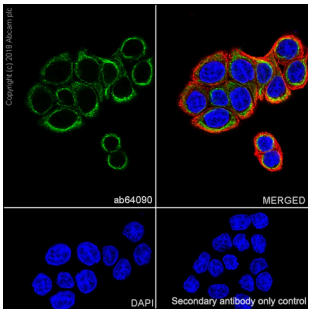
6 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 20 antibody [SP33] - BSA and Azide free (ab236435)

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

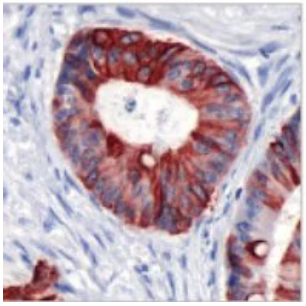
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human colon carcinoma tissue sections labeling Cytokeratin 20 with ab64090 at 1/100 dilution (17.9 µg/ml). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 6.0, epitope retrieval solution 1) for 10mins. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Hematoxylin was used as a counterstain. Positive staining on human colon carcinoma, performed on a Leica Biosystems BOND™ RX instrument.
The section was incubated with ab64090 for 30 mins at room temperature. This image was generated using ab64090, the same clone, but with a different buffer formulation.



Immunocytochemistry/ Immunofluorescence - Anti-Cytokeratin 20 antibody [SP33] - BSA and Azide free (ab236435)

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

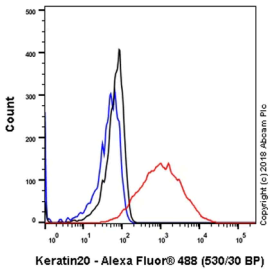
Immunocytochemistry/ Immunofluorescence analysis of HT-29 (human colorectal adenocarcinoma epithelial cell) cells labeling Cytokeratin 20 with purified ab64090 at 1/500 (3.58 µg/ml). Cells were fixed in 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 (2 µg/ml) dilution. DAPI was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab64090).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 20 antibody [SP33] - BSA and Azide free (ab236435)

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

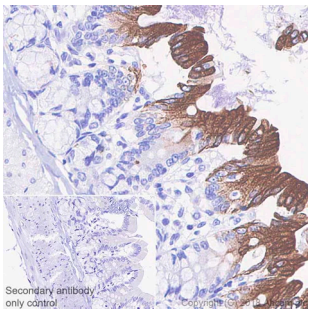
Formalin-fixed, paraffin-embedded human colon carcinoma tissue stained for Cytokeratin 20 with ab64090 at a 1/100 dilution in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS and sodium azide (ab64090).



Flow Cytometry - Anti-Cytokeratin 20 antibody [SP33] - BSA and Azide free (ab236435)

Cytokeratin 20 Flow Cytometry staining using rabbit Anti-Cytokeratin 20 antibody

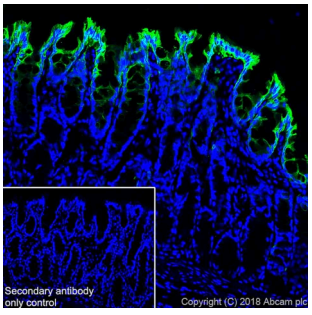
Flow cytometry analysis of HT-29 (human colorectal adenocarcinoma) labeling Cytokeratin 20 with purified ab64090 at 1/1700 dilution (1.05 µg/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as a secondary antibody. Isotypecontrol - Rabbit monoclonal IgG (ab172730) (black). Unlabeled control - Unlabelled cells (blue).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab64090).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 20 antibody [SP33] - BSA and Azide free (ab236435)

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

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Rat colon tissue sections labeling Cytokeratin 20 with ab64090 at 1/100 dilution (17.9 µg/ml). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 6.0, epitope retrieval solution 1) for 10mins. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Hematoxylin was used as a counterstain. Positive staining on rat colon, performed on a Leica Biosystems BOND™ RX instrument.
The section was incubated with ab64090 for 30 mins at room temperature. This image was generated using ab64090, the same clone, but with a different buffer formulation.



Immunohistochemistry (Frozen sections) - Anti-Cytokeratin 20 antibody [SP33] - BSA and Azide free (ab236435)

Cytokeratin 20 Immunohistochemistry (Frozen sections) staining using rabbit Anti-Cytokeratin 20 antibody

Immunohistochemistry (Frozen) analysis of rat colon tissue section labeling Cytokeratin 20 with purified ab64090 at 1/1000 (1.8 µg/ml). Sections were fixed in 4% paraformaldehyde and permeabilized with 0.2% Triton X-100. Antigen retrieval was heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 (2 µg/ml) dilution. DAPI was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab64090).

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