abcam

Product datasheet

# Anti-Cytokeratin 19 antibody [RCK108] ab9221

5 Abreviews 15 References 9 Images

## Overview

| | |
|---|---|
| **Product name** | Anti-Cytokeratin 19 antibody [RCK108] |
| **Description** | Mouse monoclonal [RCK108] to Cytokeratin 19 |
| **Host species** | Mouse |
| **Specificity** | This antibody reacts exclusively with cytokeratin 19 which is present in glandular-type epithelia and most carcinomas. It does not react with hepatocytes and hepatocellular carcinoma. |
| **Tested applications** | **Suitable for:** Flow Cyt, IHC-Fr, IHC-P |
| **Species reactivity** | **Reacts with:** Human, Zebrafish |
| **Immunogen** | Tissue, cells or virus corresponding to Human Cytokeratin 19. Human bladder carcinoma cell line T24. |

**General notes**

Cytokeratins are a subfamily of intermediate filament proteins and are characterized by a remarkable biochemical diversity, represented in human epithelial tissues by at least 20 different polypeptides. They range in molecular weight between 40 kDa and 68 kDa and isoelectric pH between 4.9 – 7.8. The individual human cytokeratins are designated 1 to 20. The various epithelia in the human body usually express cytokeratins which are not only characteristic of the type of epithelium, but also related to the degree of maturation or differentiation within an epithelium. Cytokeratin subtype expression patterns are used to an increasing extent in the distinction of different types of epithelial malignancies. The cytokeratin antibodies are not only of assistance in the differential diagnosis of tumors using immunohistochemistry on tissue sections, but are also a useful tool in cytopathology and flow cytometric assays.

The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.

If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

## 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 or - |

| | |
|---|---|
| | 80°C. Avoid freeze / thaw cycle. |
| **Storage buffer** | Preservative: 0.09% Sodium azide<br>Constituent: PBS |
| **Purity** | Protein A purified |
| **Primary antibody notes** | Cytokeratins are a subfamily of intermediate filament proteins and are characterized by a remarkable biochemical diversity, represented in human epithelial tissues by at least 20 different polypeptides. They range in molecular weight between 40 kDa and 68 kDa and isoelectric pH between 4.9 – 7.8. The individual human cytokeratins are designated 1 to 20. The various epithelia in the human body usually express cytokeratins which are not only characteristic of the type of epithelium, but also related to the degree of maturation or differentiation within an epithelium. Cytokeratin subtype expression patterns are used to an increasing extent in the distinction of different types of epithelial malignancies. The cytokeratin antibodies are not only of assistance in the differential diagnosis of tumors using immunohistochemistry on tissue sections, but are also a useful tool in cytopathology and flow cytometric assays. |
| **Clonality** | Monoclonal |
| **Clone number** | RCK108 |
| **Myeloma** | Sp2/0-Ag14 |
| **Isotype** | IgG1 |

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab9221 in the following tested applications.

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

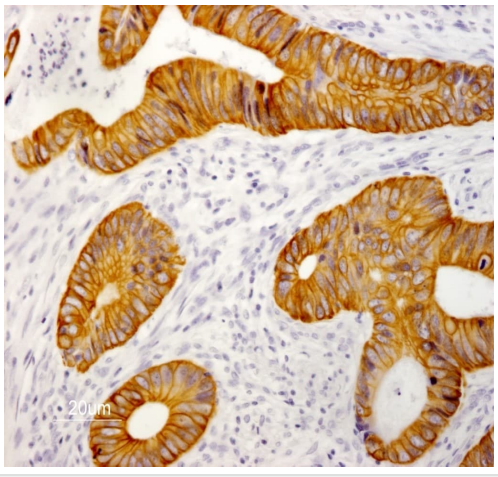
| Application | Abreviews | Notes |
|---|---|---|
| **Flow Cyt** | | 1/100 - 1/200.<br>**ab170190** - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody. |
| **IHC-Fr** | ★★★☆☆ (1) | 1/100 - 1/200. |
| **IHC-P** | ★★★★★ (1) | 1/100 - 1/200. |

## Target

| | |
|---|---|
| **Function** | Involved in the organization of myofibers. Together with KRT8, helps to link the contractile apparatus to dystrophin at the costameres of striated muscle. |
| **Tissue specificity** | Expressed in a defined zone of basal keratinocytes in the deep outer root sheath of hair follicles. Also observed in sweat gland and mammary gland ductal and secretory cells, bile ducts, gastrointestinal tract, bladder urothelium, oral epithelia, esophagus, ectocervical epithelium (at protein level). Expressed in epidermal basal cells, in nipple epidermis and a defined region of the hair follicle. Also seen in a subset of vascular wall cells in both the veins and artery of human umbilical cord, and in umbilical cord vascular smooth muscle. Observed in muscle fibers accumulating in the costameres of myoplasm at the sarcolemma in structures that contain dystrophin and spectrin. |

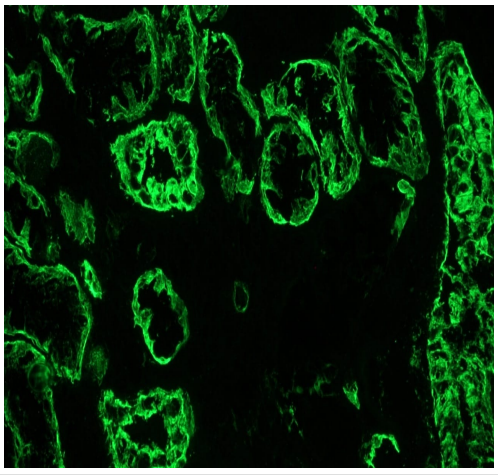
| | |
|---|---|
| **Sequence similarities** | Belongs to the intermediate filament family. |
| **Developmental stage** | Present in hair follicles at all stages of development. |
| **Domain** | This keratin differs from all other IF proteins in lacking the C-terminal tail domain. |

## Images



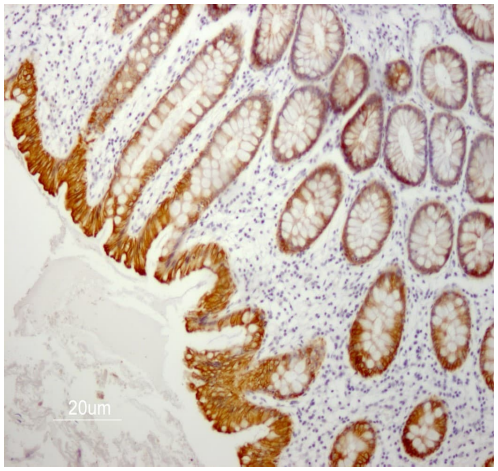

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 19 antibody [RCK108] (ab9221)

Indirect immunoperoxidase staining of human colon adenocarcinoma paraffin tissue section with ab9221. Dilution 1:50 and microwave pretreatment. Specific staining of the epithelial tumor cells. No reactivity in connective tissues.



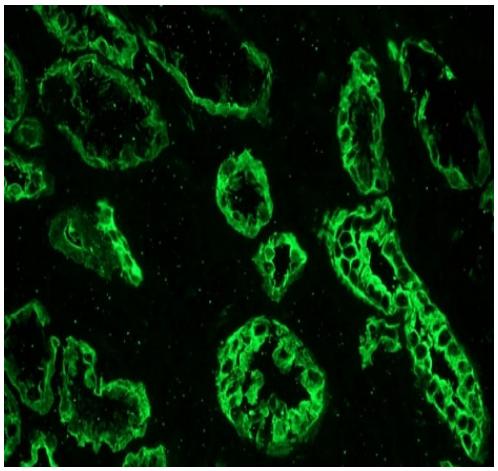
Immunohistochemistry (Frozen sections) - Anti-Cytokeratin 19 antibody [RCK108] (ab9221)

Immunohistochemistry on a frozen tissue sections of human kidney with ab9221 (1:500).



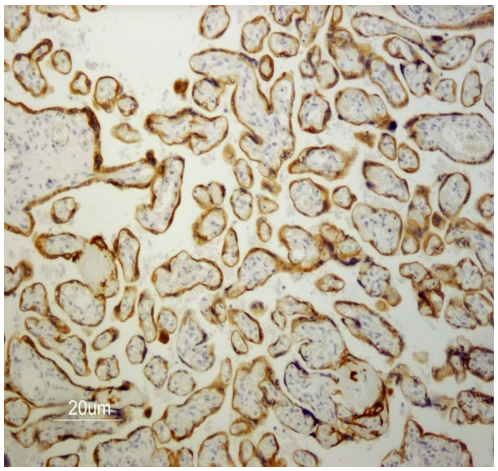

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 19 antibody [RCK108] (ab9221)

Indirect immunoperoxidase staining of human small intestine paraffin tissue section with ab9221. Dilution 1:50 and microwave pretreatment. Specific staining of the epithelial cells. No reactivity in the connective tissues.



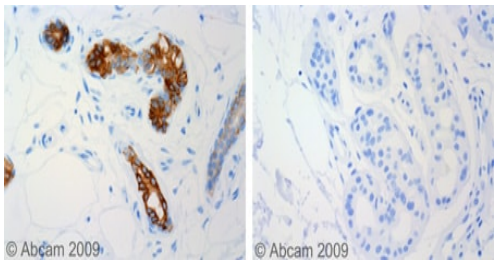
Immunohistochemistry (Frozen sections) - Anti-Cytokeratin 19 antibody [RCK108] (ab9221)

Immunohistochemistry on frozen tissue sections of human colon with ab9221 (1:500).



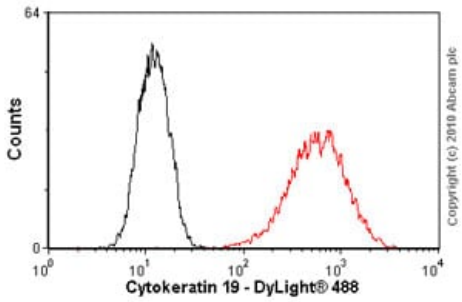

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 19 antibody [RCK108] (ab9221)

Indirect immunoperoxidase staining of human placenta paraffin tissue section with ab9221. Dilution 1:50 and microwave pretreatment. Specific staining of the epithelial cells. No reactivity in the connective tissues.



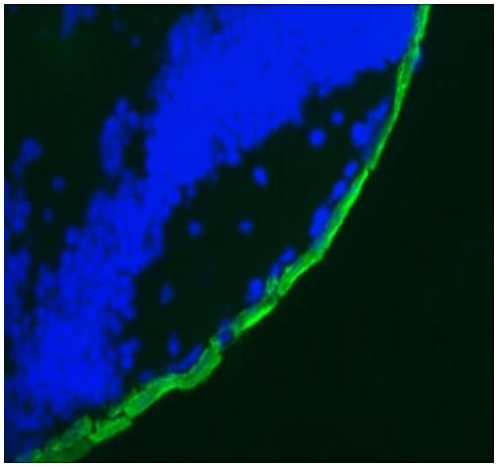

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 19 antibody [RCK108] (ab9221)

ab9221 staining Cytokeratin 19 in human skin (sweat glands).
Left panel: with primary antibody at 1 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 in a DAKO PT link. 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.



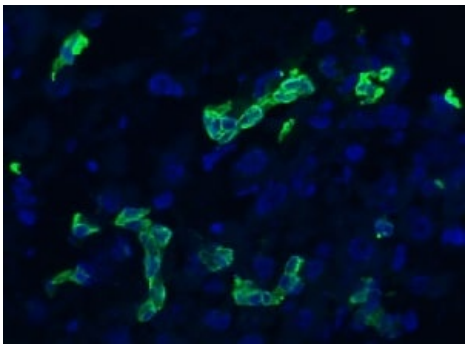

Flow Cytometry - Anti-Cytokeratin 19 antibody [RCK108] (ab9221)

Overlay histogram showing MCF-7 cells stained with ab9221 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Triton 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 (ab9221, 1µg/1x$10^6$ 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 IgG1 [ICIGG1] (**ab91353**, 2µg/1x$10^6$ cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in MCF-7 cells fixed with methanol (5 min)/permeabilized in 0.1% PBS-Triton used under the same conditions.



Immunohistochemistry (Frozen sections) - Anti-Cytokeratin 19 antibody [RCK108] (ab9221)

ab9221 staining cytokeratin 19 in three-day-old Zebrafish tissue by Immunohistochemistry (Frozen sections).



Immunohistochemistry (Frozen sections) - Anti-Cytokeratin 19 antibody [RCK108] (ab9221)

Immunohistochemistry on frozen section of human liver bile duct epithelium



## Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

## Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors