abcam

ab854

Anti-Cytokeratin 20 antibody [Ks20.8]

Key facts

Isotype	IgG2a
Host species	Mouse
Storage buffer	pH: 7.3 Preservative: 0.1% Sodium azide Constituents: Carrier protein, PBS
Form	Liquid
Clonality	Monoclonal
Clone number	Ks20.8
Purity	Tissue culture supernatant
Specificity	This antibody is highly specific to cytokeratin 20 and shows no cross-reaction with other intermediate filament proteins. It is essentially non-reactive in squamous cell carcinomas and adenocarcinomas of the breast, lung, and endometrium, non-mucinous tumors of the ovary and small cell carcinomas.
Light chain type	unknown

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1/50
Notes	(Also see PMID: 20332776) ab170191 - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

ICC/IF

Tested

Species	Human
Dilution info	1/200
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	This antibody may be diluted to a titer of 1:50-1:100 in an ABC method.We suggest an incubation period of 30-60 minutes at room temperature.

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	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

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

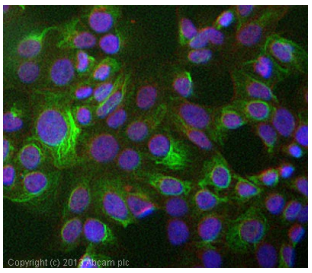
We do not recommend this combination. It is not covered by our product promise.

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.

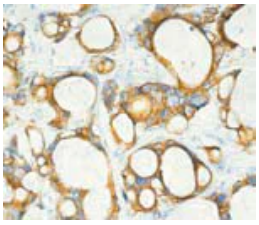
4 product images



Immunocytochemistry/ Immunofluorescence - Anti-Cytokeratin 20 antibody [Ks20.8] (ab854)

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

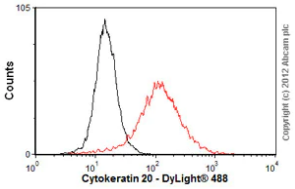
ICC/IF image of ab854 stained Jeg3 cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab854, 1/200 dilution) overnight at +4°C. The secondary antibody (green) was ab96879, DyLight® 488 goat anti-mouse IgG (H+L) used at a 1/250 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



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 20 antibody [Ks20.8] (ab854)

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

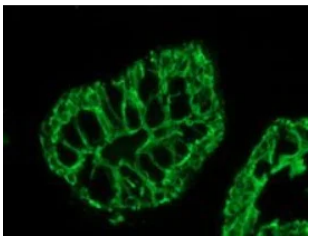
ab854 staining cytokeratin in human colon cancer tissue section by Immunohistochemistry (Formalin/ PFA fixed paraffin embedded tissue sections).



Flow Cytometry - Anti-Cytokeratin 20 antibody [Ks20.8] (ab854)

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

Overlay histogram showing LoVo cells stained with ab854 (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 (ab854, 1/50 dilution) 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, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.



Immunocytochemistry/ Immunofluorescence - Anti-Cytokeratin 20 antibody [Ks20.8] (ab854)

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

Immunofluorescent analysis of human colon epithelium, staining Cytokeratin 20 with ab854.

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