abcam

ab756

Anti-Cytokeratin antibody [MNF116]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.3 - 7.5 Preservative: 0.05% Sodium azide Constituents: Tissue culture supernatant, 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing KRT1 protein. The exact immunogen used to generate this antibody is proprietary information. Database link P04264
Clone number	MNF116
Purity	Tissue culture supernatant
Light chain type	kappa

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1 µg/cells for 6 µg/cells
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

IHC-P

Tested

Species	Human
Dilution info	-
Notes	This antibody may be diluted to a titer of 1:25-1:50 in an ABC method. Staining Protocol: We suggest an incubation period of 30-60 minutes at room temperature. However, depending upon the fixation conditions and the staining system employed, optimal incubation conditions and antibody dilutions should be determined by the user. Enzymatic antigen retrieval of paraffin embedded tissues is recommended prior to the immunostaining.

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

IHC-Fr

Expected

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

Target data

See full target information KRT1

Function	May regulate the activity of kinases such as PKC and SRC via binding to integrin beta-1 (ITB1) and the receptor of activated protein C kinase 1 (RACK1). In complex with C1QBP is a high affinity receptor for kininogen-1/HMWK.

Storage

Shipped at conditions	Blue Ice

Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Storage information	Avoid freeze / thaw cycle

Supplementary info

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

Activity summary	Cytokeratins also known by the abbreviation 'CK' are a class of intermediate filament proteins providing structural support to epithelial cells. Their mass ranges between 40 kDa to 68 kDa. Cytokeratins are expressed in epithelial tissues including the outer layer of skin and line organs such as the gut and respiratory tract. Commonly referenced with specific subtypes CK MNF116 or CK cocktail antibodies are used for detection in laboratory settings. These proteins help maintain cell integrity and protect from mechanical stress.
Biological function summary	Keratins function as a complex to create a stable cytoskeletal network inside epithelial cells. They interact with proteins to form keratin filaments contributing to the mechanical strength and resilience of cells. Cytokeratins also play a role in intracellular signaling and cellular differentiation. They participate in wound healing processes through modulation of cell proliferation and apoptosis. The CK MNF116 marker is especially noted for its application in identifying and characterizing epithelial proteins in pathology.
Pathways	Cytokeratins are involved in pathways related to cell structure and stress response. Specifically they play key roles in the Epidermal Growth Factor (EGF) signaling pathway and the cell cycle control pathway. These pathways involve proteins like epidermal growth factor receptors (EGFR) and cyclins which regulate cell cycle progression. Cytokeratins influence these pathways by impacting cell adhesion and proliferation essential for maintaining epithelial cell functions.
Associated diseases and disorders	Cytokeratins have significant roles in cancer diagnostics particularly in epithelial tumors such as carcinomas. Altered expression of cytokeratins can indicate the presence and progression of tumors. Cytokeratin profiles including CK MNF116 positive markers provide insights into tumor type and origin. Additionally they relate to liver disorders like cirrhosis where abnormal keratin organization is observed. These proteins show associations with other structural proteins including vimentin in disease states where cell integrity and signaling are often compromised.

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

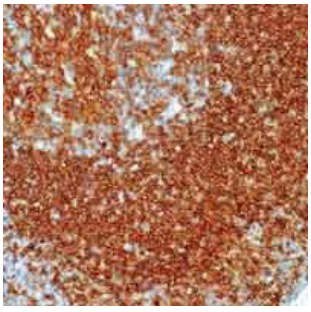
We do not recommend this combination. It is not covered by our product promise.

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.

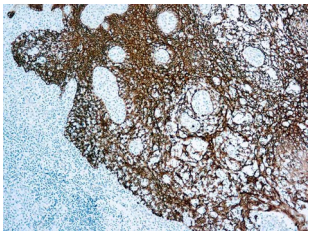
5 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin antibody [MNF116] (ab756)

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

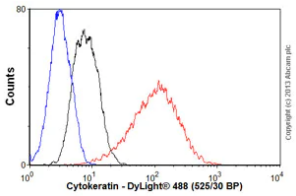
ab756 staining human tonsil by IHC-P.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin antibody [MNF116] (ab756)

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

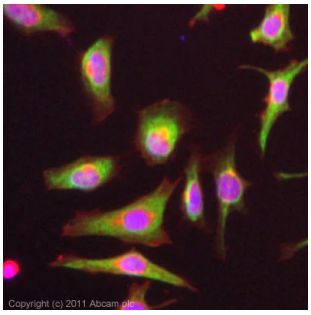
Formalin fixed paraffin embedded human tonsil tissue, staining Cytokeratin with ab756 in immunohistochemical analysis



Flow Cytometry - Anti-Cytokeratin antibody [MNF116] (ab756)

Cytokeratin Flow Cytometry staining using mouse Anti-Cytokeratin antibody

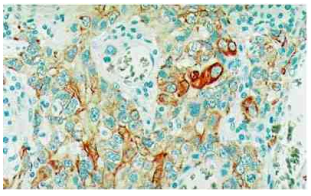
Overlay histogram showing MCF7 cells stained with ab756 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab756, 1µg/1x10^6 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/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line). Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.



Immunocytochemistry/ Immunofluorescence - Anti-Cytokeratin antibody [MNF116] (ab756)

Cytokeratin Immunocytochemistry/ Immunofluorescence staining using mouse Anti-Cytokeratin antibody

This image was produced with ab82612, which is the same as ab756 except for the buffer. ICC/IF image of ab82612 stained HeLa cells. The cells were 4% formaldehyde (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 (ab82612, neat) 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 antibody [MNF116] (ab756)

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

Formalin fixed paraffin embedded human lung carcinoma stained with Cytokeratin using ABC and AEC chromogen.

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