abcam

ab109725

Anti-Cytokeratin 17 antibody [EP1623] - Cytoskeleton Marker

Anti-Cytokeratin 17 antibody [EP1623] - Cytoskeleton Marker (ab109725) is a rabbit monoclonal antibody detecting Cytokeratin 17 in **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF**. Suitable for **Human**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 30 publications

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% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EP1623
Purification technique	Affinity purification Protein A
Concentration	0.1 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 antigen retrieval Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/500
Notes	**For unpurified use at 1/100 - 1/250.**

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information KRT17

Function Type I keratin involved in the formation and maintenance of various skin appendages, specifically in determining shape and orientation of hair (By similarity). Required for the correct growth of hair follicles, in particular for the persistence of the anagen (growth) state (By similarity). Modulates the function of TNF in the specific context of hair cycling. Regulates protein synthesis and epithelial cell growth through binding to the adapter protein SFN and by stimulating Akt/mTOR pathway (By similarity). Involved in tissue repair. May be a marker of basal cell differentiation in complex epithelia and therefore indicative of a certain type of epithelial 'stem cells'. Acts as a promoter of epithelial proliferation by acting a regulator of immune response in skin: promotes Th1/Th17-dominated immune environment contributing to the development of basaloid skin tumors (By

similarity). May act as an autoantigen in the immunopathogenesis of psoriasis, with certain peptide regions being a major target for autoreactive T-cells and hence causing their proliferation.

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 17 antibody [EP1623] - Cytoskeleton Marker (ab109725) 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 17?
Anti-Cytokeratin 17 [EP1623] - Cytoskeleton Marker (ab109725) specifically detects a band for Cytokeratin 17 (UniProt: Q04695) at a molecular weight of 48kDa.

Trusted by the scientific community
Anti-Cytokeratin 17 [EP1623] - Cytoskeleton Marker (ab109725) was first used in a scientific publication in 2011 and has been cited over 30 times in peer-reviewed journals.

Other related products
We have a range of other formats of antibody clone [EP1623] also available for your convenience: ab109725, Alexa Fluor® 488 - ab185032, Biotin - ab195906, Alexa Fluor® 647 - ab196199, PE - ab210724, Carrier free - ab239986

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 17 often called K17 or keratin 17 is a type I intermediate filament protein with a molecular weight of approximately 46 kDa. It forms part of the cytoskeleton in epithelial cells and is notably present in the basal cells of epithelial tissues including the skin hair follicles and the lining of internal organs. Due to its specific expression pattern K17 serves as a useful biomarker in various research and clinical settings.
Biological function summary	The roles of K17 extend beyond mere structural support. This protein contributes to cellular processes such as proliferation tissue repair and the regulation of immune responses. K17 often forms a complex with its partner keratin 6 enabling structural stability and resilience in epithelial cells. Its presence influences the behavior of the cells in skin and other epithelial-lined organs.
Pathways	K17 participates in key pathways related to skin biology and inflammation notably the Wnt/B-catenin and NF-κB signaling pathways. These pathways connect K17 to cellular processes like growth differentiation and inflammation. In particular keratin 6 is another important protein in these cascades closely interacting with K17 in maintenance and repair processes within epithelial tissues.
Associated diseases and disorders	K17 has been implicated in psoriasis and certain types of cancer such as cervical and breast cancer. In psoriasis an inflammatory skin condition K17 interacts with pro-inflammatory cytokines contributing to the hyperproliferative state of the skin. Its overexpression serves as a marker in diagnosing and understanding the severity of these disorders highlighting its relationship with keratin 6 which is similarly upregulated in psoriatic lesions and certain tumors. These associations make K17 a significant focus for therapeutic targeting and diagnostic applications.

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.

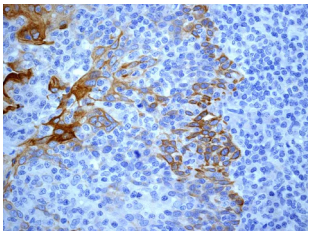
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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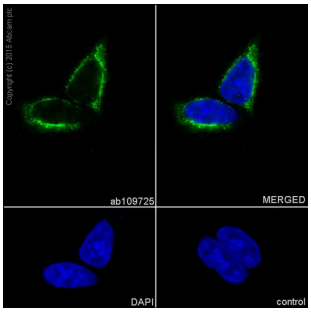
7 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 17 antibody [EP1623] - Cytoskeleton Marker (ab109725)

Cytokeratin 17 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cytokeratin 17 antibody

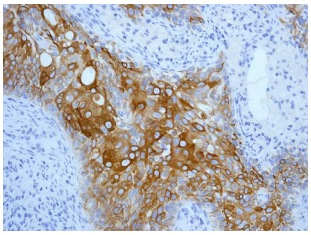
Immunohistochemical analysis of paraffin-embedded Human tonsil tissue using ab109725 at 1/100 dilution
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-Cytokeratin 17 antibody [EP1623] - Cytoskeleton Marker (ab109725)

Cytokeratin 17 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Cytokeratin 17 antibody

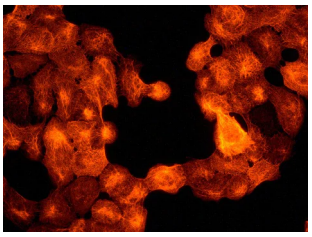
Immunocytochemistry/Immunofluorescence analysis of HeLa (human cervix adenocarcinoma) cells labelling Cytokeratin 17 with purified ab109725 at 1/500. Cells were fixed with 100% methanol. ab150077, Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody. Nuclei were counterstained with DAPI (blue).
Secondary Only Control: PBS was used instead of the primary antibody as the negative control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 17 antibody [EP1623] - Cytoskeleton Marker (ab109725)

Cytokeratin 17 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cytokeratin 17 antibody

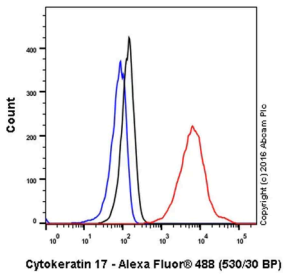
Immunohistochemical analysis of paraffin-embedded human squamous cervical carcinoma tissue using ab109725 at 1/100 dilution
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-Cytokeratin 17 antibody [EP1623] - Cytoskeleton Marker (ab109725)

Cytokeratin 17 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Cytokeratin 17 antibody

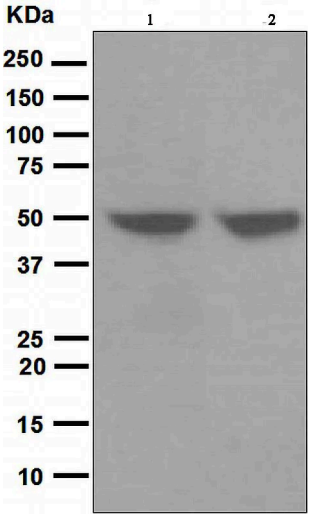
Immunofluorescent staining of A431 cells using ab109725 at 1/100 dilution



Flow Cytometry (Intracellular) - Anti-Cytokeratin 17 antibody [EP1623] - Cytoskeleton Marker (ab109725)

Cytokeratin 17 Flow Cytometry (Intracellular) staining using rabbit Anti-Cytokeratin 17 antibody

Intracellular Flow Cytometry analysis of A431 (human epidermoid carcinoma) cells labeling Cytokeratin 17 with purified ab109725 at 1/20 dilution (10ug/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488) (1/2000) was used as the secondary antibody. Rabbit monoclonal IgG (Black) was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) was used as the unlabeled control.



Western blot - Anti-Cytokeratin 17 antibody [EP1623] - Cytoskeleton Marker (ab109725)

All lanes:
Western blot - Anti-Cytokeratin 17 antibody [EP1623] - Cytoskeleton Marker (ab109725) at 1/1000 dilution

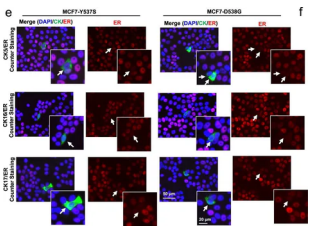
Lane 1:
A431 cell lysate at 10 µg

Lane 2:
HACAT cell lysates at 10 µg

Secondary

All lanes:
Standard HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 48 kDa



Immunocytochemistry/ Immunofluorescence - Anti-Cytokeratin 17 antibody [EP1623] - Cytoskeleton Marker (ab109725)

Cytokeratin 17 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Cytokeratin 17 antibody

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Immunocytochemistry-immunofluorescence using Anti-Cytokeratin 17 antibody [EP1623] - Cytoskeleton Marker, ab109725. Publication image from Zhu, L. et al., 2022, Nat Commun, 35440136. Legend direct from paper.

Basal cytokeratins induction is independent of mutant ER genomic binding but requires low ER expression.a Heatmap representing fold change mRNA expression (E2/veh) of six basal cytokeratins and four luminal cytokeratins in ER+ breast cancer lines from six publicly available data sets (GSE89888, GSE94493, GSE108304, GSE3834, GSE38132, and GSE50693). GREB1, PGR, and TFF1 are canonical E2-regulated genes included as positive controls. b Genomic track showing ER binding intensities at KRT5/6A/6B and KRT14/16/17 loci from ER ChIP-seq data sets of MCF7 ESR1 mutant cells. GREB1 locus serve as a positive control. c Graphic view of Pearson correlation between expression of ESR1 and each basal or luminal cytokeratin in ER+ breast tumors in TCGA (n = 808) and METABRIC (n = 1505) cohorts. Color scale and size of dots represent correlation coefficient and significance, respectively. d qRT-PCR measurement of ESR1, KRT5/6A/6B/14/16/17 mRNA levels in MCF7 WT and ESR1 mutant cells with ESR1 siRNA knockdown for 7 days. mRNA fold changes were normalized to WT cells; RPLP0 levels were measured as internal control. Each bar represents mean ± SD with three biological replicates. Data shown are representative from three independent experiments. Student’ s t-test (two-sided) was used to compare the gene expression between scramble and knockdown groups. e Representative images of ER, CK5, CK16, and CK17 staining in MCF7-Y537S and D538G cells. BCKs positive cells are highlighted with white arrows. Images were taken under x20 magnification. f Dot plots quantifying the ER intensities in BCKs positive (blue) and the corresponding proximal negative (red) cells from each region. Individual data points from five different regions per group from one experiment, representative of three independent experiments are shown. Paired t-test (two-sided) was applied to compare ER intensities between BCKs positive and negative cells. Source data are provided as a Source Data file for a, c, d, f.

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