abcam

ab86734

Anti-pan Cytokeratin antibody [AE1/AE3 + 5D3]

Anti-pan Cytokeratin antibody [AE1/AE3 + 5D3] (ab86734) is a mouse recombinant multiclonal antibody detecting pan Cytokeratin in **Flow Cytometry, IHC-P, ICC/IF**. Suitable for **Chicken, Dog, Human, Pig**.

- Recombinant format for unrivalled batch-batch consistency
- Over 60 publications
- Trusted since 2010

Lab Essentials

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	Preservative: 0.09% Sodium azide
Form	Liquid
Clonality	Multiclonal
Immunogen	Full Length Protein corresponding to Human KRT8. The exact immunogen used to generate this antibody is proprietary information. Database link P05787
Clone number	AE1/AE3 + 5D3
Purification technique	Affinity purification Protein A/G
Specificity	The ab86734 is a combination of [AE1/AE3] and [5D3] clones and can be used to detect most human epithelia. [AE1/AE3] recognizes acidic and basic subfamilies of cytokeratins, with molecular weights ranging from 40 to 67 kDa. [5D3] recognizes Cytokeratin 8 and 18 intermediate filament proteins. In normal tissues, [5D3] recognizes all simple and glandular epithelium. It has been observed that [AE1/AE3] has had problems marking certain tissues types and adenocarcinomas. The addition of [5D3] may remedy some of the limitations observed when staining with [AE1/AE3] alone.

Reactivity data

IHC-P

Tested

Species	Chicken
Dilution info	1/250
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Species	Dog
Dilution info	1/250
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Species	Goat
Dilution info	1/250
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Species	Pig
Dilution info	-
Notes	-

Species	Human
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1/100
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Expected

Species	Chicken, Dog, Goat, Pig
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Expected

Species	Chicken, Dog, Goat, Pig
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information KRT8

Function	Required for the formation of KRT8/KRT18 filaments that are involved in ARHGEF40-mediated actin stress fiber formation and tensional force-induced stress fiber formation and reinforcement (PubMed:26823019). Together with KRT19, helps to link the contractile apparatus to dystrophin at the costameres of striated muscle.

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

Notes

Product Specifications
Anti-pan Cytokeratin antibody [AE1/AE3 + 5D3] (ab86734) is a recombinant mouse multiclonal antibody which is comprised of multiple monoclonal antibodies targeting different epitopes and recapitulating the performance of a polyclonal.
Anti-pan Cytokeratin antibody [AE1/AE3 + 5D3] (ab86734) is validated for use in Flow Cyt, ICC/IF and IHC-P in chicken, dog, human and pig samples.
Anti-pan Cytokeratin antibody [AE1/AE3 + 5D3] (ab86734) specifically detects pan Cytokeratin/ Keratin, type II cytoskeletal 1b (UniProt ID: Q7Z794; Molecular weight: 62kDa) and is sold in a 100 µL selling size.

Quality and Validation
Abcams high quality manufacturing and validation processes ensure anti-pan Cytokeratin antibody [AE1/AE3 + 5D3] (ab86734) has high sensitivity and specificity alongside high lot-to-lot consistency and reproducibility.

This product was changed from ascites to tissue culture supernatant on 8th March 2018. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team.

What is an oligoclonal antibody?
This oligoclonal antibody is a cocktail of monoclonal antibodies that have been carefully selected. Oligoclonal antibodies have not only the specificity and batch-to-batch consistency of a monoclonal antibody, but also have the advantage of the sensitivity of a polyclonal antibody due to their ability to recognize multiple epitopes on an antigen.

Supplementary info

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

Activity summary	Pan cytokeratin also known as cytokeratin AE1/AE3 is a cytoskeletal protein complex that consists of different keratin polypeptides. It mechanically supports epithelial cells contributing to their structural integrity. The protein mass is variable due to its composite nature ranging between 40 to 67 kDa. Pan cytokeratin is expressed in epithelial tissues throughout the body serving as a reliable marker for identifying epithelial origin cells in histological studies.
Biological function summary	Keratins in pan cytokeratin contribute to maintaining structural stability within epithelial cells. They act as components of the cytoskeletal network interacting with other cellular structures to provide protection from stress and mechanical damage. Pan cytokeratin exists as part of the intermediate filament protein complex which plays a significant role in cellular mechanics and cohesion essential for tissue integrity.
Pathways	Intermediate filaments containing pan cytokeratin participate in pathways related to cell differentiation and stress response. Its interactions with other proteins like desmoplakin and plectin link the cytoskeletal filaments to cell membranes and the

extracellular matrix. This involvement is important in pathways related to cellular structural integrity and epithelial-mesenchymal transition (EMT).

Associated diseases and disorders

Pan cytokeratin serves as a critical marker in the diagnosis of epithelial-derived cancers such as carcinoma and conditions like psoriasis. Abnormal expression patterns of pan cytokeratin indicate tumor presence and origin. Its connection to proteins such as E-cadherin and vimentin assists in understanding the progression and metastasis of cancer by facilitating EMT and tissue invasion diagnostics.

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

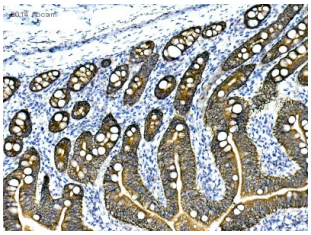
We do not recommend this combination. It is not covered by our product promise.

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.

8 product images



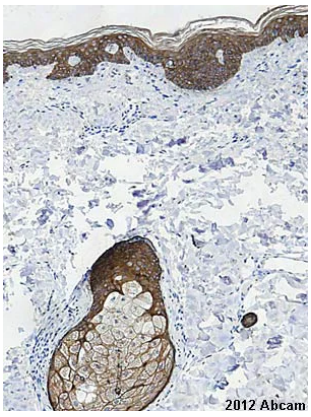
This image is courtesy of a customer review submitted by Carl Hobbs

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-pan Cytokeratin antibody [AE1/AE3 + 5D3] (ab86734)

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

ab86734 staining pan Cytokeratin in pig small intestine tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 1% BSA for 10 minutes at 21°C; antigen retrieval was by heat mediation in citric acid. Samples were incubated with primary antibody (1/250 in TBS/BSA/azide)

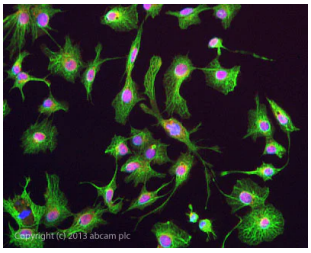
for 2 hours at 21°C. A Biotin-conjugated goat anti-mouse IgG polyclonal (1/200) was used as the secondary antibody.



This image is courtesy of a customer review submitted by Carl Hobbs

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-pan Cytokeratin antibody [AE1/AE3 + 5D3] (ab86734)

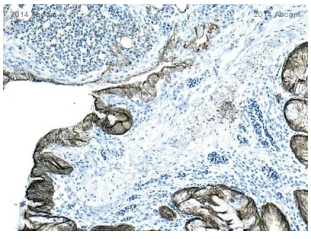
ab8673 staining human skin sections by IHC-P. The tissue was fixed with formaldehyde and a heat mediated antigen retrival step was performed with citric acid pH 6. Blocking of the sample was done with 1% BSA for 10 minutes at 21°C, followed by staining with ab8673 at 1/250 in TBS/BSA/azide for 2h at 21°C. A biotinylated goat anti-mouse polyclonal antibody at 1/200 was used as the secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-pan Cytokeratin antibody [AE1/AE3 + 5D3] (ab86734)

Pan Cytokeratin Immunocytochemistry/ Immunofluorescence staining using mouse Anti-pan Cytokeratin antibody

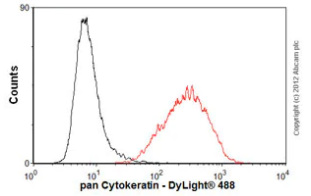
ab86734 stained HepG2 cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody ab86734 at 1/100 dilution overnight at +4°C. The secondary antibody (green) was DyLight® 488 goat anti- mouse (ab96879) 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. This antibody also gave a positive result in methanol fixed (100%, 5min) HeLa, Hek293. HepG2, and MCF-7 cells, also in formaldehyde fixed (4%, 10min) HeLa, Hek293, and MCF-7 cells at 1/100 dilution.



Mr Carl Hobbs

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-pan Cytokeratin antibody [AE1/AE3 + 5D3] (ab86734)

Formaldehyde fixed chicken lung tissue stained for pan Cytokeratin with ab86734 at a 1/200 dilution. Heat mediated - Buffer/Enzyme Used: Citric acid. 1% BSA used for blocking for 10 minutes at RT. Primary incubation for 16 hours at RT in TBS/BSA/Azide. Secondary: Goat polyclonal conjugated to biotin used at a 1/200 dilution.

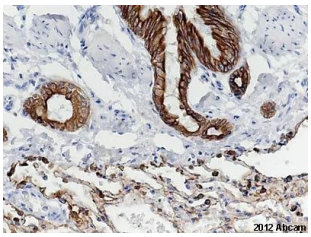


Flow Cytometry - Anti-pan Cytokeratin antibody [AE1/AE3 + 5D3] (ab86734)

Pan Cytokeratin Flow Cytometry staining using mouse Anti-pan Cytokeratin antibody

Overlay histogram showing A431 cells stained with ab86734 (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 (ab86734, 1/100 dilution) for 30 min at 22°C. The

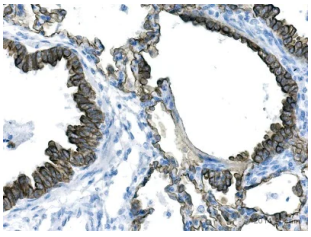
secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.



Mr Carl Hobbs

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-pan Cytokeratin antibody [AE1/AE3 + 5D3] (ab86734)

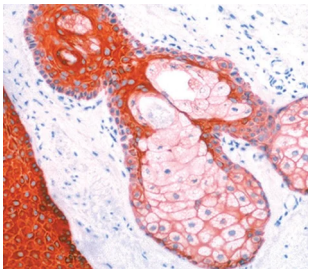
Formaldehyde fixed dog lung tissue stained for pan Cytokeratin with ab86734 at a 1/250 dilution. Heat mediated - Buffer/Enzyme Used: Citric acid. 1% BSA used for blocking for 10 minutes at RT. Primary incubation for 2 hours at RT in TBS/BSA/Azide. Secondary: Goat polyclonal conjugated to biotin used at a 1/200 dilution.



Mr Carl Hobbs

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-pan Cytokeratin antibody [AE1/AE3 + 5D3] (ab86734)

Formaldehyde fixed goat lung tissue stained for pan Cytokeratin with ab86734 at a 1/250 dilution. Heat mediated - Buffer/Enzyme Used: Citric acid. 1% BSA used for blocking for 10 minutes at RT. Primary incubation for 2 hours at RT in TBS/BSA/Azide. Secondary: Goat polyclonal conjugated to biotin used at a 1/200 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-pan Cytokeratin antibody [AE1/AE3 + 5D3] (ab86734)

Skin stained for pan Cytokeratin with ab86734 at a 1/100 dilution.

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