abcam

ab214586

Anti-Cytokeratin 5 antibody [EP1601Y] - BSA and Azide free

Anti-Cytokeratin 5 antibody [EP1601Y] - BSA and Azide free (ab214586) is a rabbit recombinant monoclonal antibody provided in a PBS only buffer for easy conjugation. Suitable for **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF** in **Human, Mouse, Rat**.

- Clone EP1601Y is the most cited clone to Cytokeratin 5
- BSA, sodium azide, and glycerol-free for easy conjugation
- Biophysical QC for unrivalled batch-batch consistency
- Over 10 publications

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EP1601Y
Purification technique	Affinity purification Protein A
Specificity	Mouse reactivity is based on IHC (positive tissues: Liver, lung, brain and skin). However, WB was negative for Mouse brain, heart, kidney and spleen. There is background staining in mouse and rat islet.
Concentration	0.99 - 1.018 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab199376 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat

Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Human
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information KRT5

Function	Required for the formation of keratin intermediate filaments in the basal epidermis and maintenance of the skin barrier in response to mechanical stress (By similarity). Regulates the recruitment of Langerhans cells to the epidermis, potentially by modulation of the abundance of macrophage chemotactic cytokines, macrophage inflammatory cytokines and CTNND1 localization in keratinocytes (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C

Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

What is this antibody validated in?
Anti-Cytokeratin 5 antibody [EP1601Y] - BSA and Azide free (ab214586) 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, Mouse, Rat samples.

What is the molecular weight of Cytokeratin 5?
Anti-Cytokeratin 5 [EP1601Y] - BSA and Azide free (ab214586) specifically detects a band for Cytokeratin 5 (UniProt: P13647) at a molecular weight of 62kDa.

Trusted by the scientific community
Anti-Cytokeratin 5 [EP1601Y] - BSA and Azide free (ab214586) was first used in a scientific publication in 2016 and has been cited over 10 times in peer-reviewed journals.

Other related products
We have a range of other formats of antibody clone [EP1601Y] also available for your convenience: ab52635, Alexa Fluor® 488 - ab193894, Alexa Fluor® 647 - ab193895, HRP - ab193896, Carrier free - ab214586, APC - ab224984, PE - ab224985, ab321868

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.

Species reactivity
Rat: We have preliminary internal testing data to indicate this antibody may not react with this species.
Please contact us for more information.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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.

20 product images

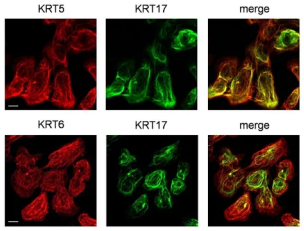


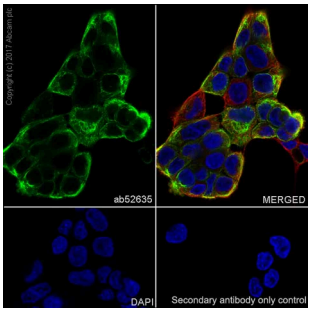
Image from Khanom R. et al PLoS One. 2016 Aug 11;11(8):e0161163. doi: 10.1371/journal.pone.0161163. eCollection 2016.

Immunocytochemistry/ Immunofluorescence - Anti-Cytokeratin 5 antibody [EP1601Y] - BSA and Azide free (ab214586)

Colocalization of KRT5, KRT6 and KRT17 in HSC3 cells
Immunocytochemistry in HSC3 (human oral squamous carcinoma cell line) cells. Scale bar, 10 µm.

(Taken from Figure S3 of Khanom et al)

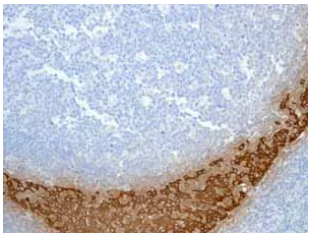
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52635).



Immunocytochemistry/ Immunofluorescence - Anti-Cytokeratin 5 antibody [EP1601Y] - BSA and Azide free (ab214586)

Cytokeratin 5 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Cytokeratin 5 antibody

Immunocytochemistry/ Immunofluorescence analysis of A431 (Human epidermoid carcinoma epithelial cell) cells labeling Cytokeratin 6 with Purified ab52635 at 1:100 dilution. Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor ® 594) 1:200 (2.5 µg/ml). ab150077 Goat anti rabbit IgG(Alexa Fluor ® 488) was used as the secondary antibody at 1:1000 dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52635).

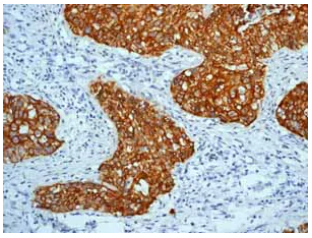


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 5 antibody [EP1601Y] - BSA and Azide free (ab214586)

Cytokeratin 5 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cytokeratin 5 antibody

Unpurified ab52635 showing positive staining in normal tonsil squamous cells tissue.

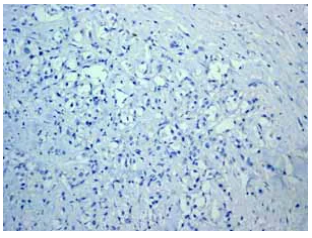
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52635).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 5 antibody [EP1601Y] - BSA and Azide free (ab214586)

Cytokeratin 5 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cytokeratin 5 antibody

This IHC data was generated using the same anti-Cytokeratin 5 antibody clone, EP1601Y, in a different buffer formulation (cat# ab52635).
ab52635 showing positive staining in squamous cell cervical carcinoma tissue.

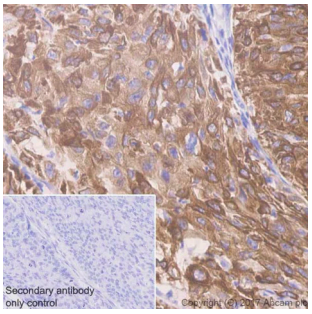


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 5 antibody [EP1601Y] - BSA and Azide free (ab214586)

Cytokeratin 5 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cytokeratin 5 antibody

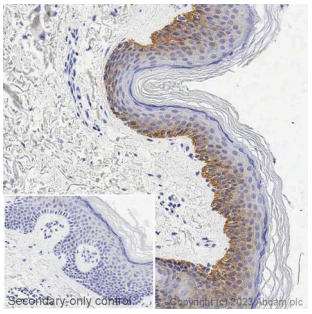
Unpurified ab52635 showing negative staining in ductal breast carcinoma tissue.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52635).



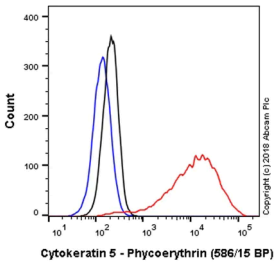
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 5 antibody [EP1601Y] - BSA and Azide free (ab214586)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human cervical carcinoma tissue sections labeling Cytokeratin 5 with Purified ab52635 at 1:200 dilution. Heat mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer, pH 9.0). Tissue was counterstained with Hematoxylin. ImmunoHistoProbe one step HRP Polymer (ready to use) secondary antibody was used. PBS instead of the primary antibody was used as the negative control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52635).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 5 antibody [EP1601Y] - BSA and Azide free (ab214586)

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52635). IHC image of Cytokeratin 5 staining in a section of formalin-fixed paraffin-embedded normal human skin* performed on a Leica Biosystems BOND® RX instrument. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20mins. The section was then incubated with ab52635, 0.1ug/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody. For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times. *Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre



Flow Cytometry (Intracellular) - Anti-Cytokeratin 5 antibody [EP1601Y] - BSA and Azide free (ab214586)

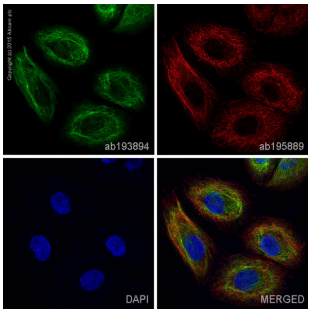
Cytokeratin 5 Flow Cytometry (Intracellular) staining using rabbit Anti-Cytokeratin 5 antibody

Clone EP1601Y (ab214586) has been successfully conjugated by Abcam. This image was generated using Anti-Cytokeratin 5 antibody [EP1601Y] (PE). Please refer to ab224985 for protocol details. Overlay histogram showing A431 cells stained with ab224985 (red line). The cells were fixed with 4% formaldehyde (10 min) and then permeabilized with 0.1% PBS-Triton X-100 for 15 min. The cells were then incubated in 1x PBS / 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (ab224985, 1/5000 dilution) for 30 min at 22°C.

Isotype control antibody (black line) was Rabbit IgG (monoclonal) Phycoerythrin (ab209478) used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5,000 events were collected using a 50 mW Yellow/Green laser (561nm) and 586/15 bandpass filter.

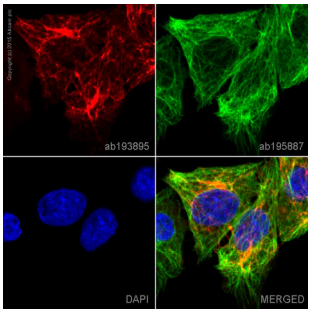
This antibody gave a positive signal in A431 cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Triton X-100 for 15 min used under the same conditions.



Immunocytochemistry/ Immunofluorescence - Anti-Cytokeratin 5 antibody [EP1601Y] - BSA and Azide free (ab214586)

Cytokeratin 5 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Cytokeratin 5 antibody

Clone EP1601Y (ab214586) has been successfully conjugated by Abcam. This image was generated using Anti-Cytokeratin 5 antibody [EP1601Y] (Alexa Fluor® 488). Please refer to ab193894 for protocol details.
ab193894 staining Cytokeratin 5 in HACAT cells. The cells were fixed with 4% formaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 10% normal goat serum in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab193894 at 1/200 dilution (shown in green) and ab195889, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 594), at 1/200 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue). Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

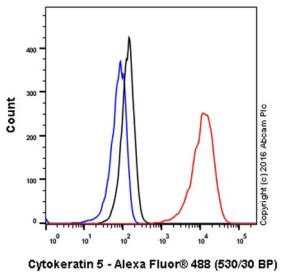


Immunocytochemistry/ Immunofluorescence - Anti-Cytokeratin 5 antibody [EP1601Y] - BSA and Azide free (ab214586)

Cytokeratin 5 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Cytokeratin 5 antibody

Clone EP1601Y (ab214586) has been successfully conjugated by Abcam. This image was generated using Anti-Cytokeratin 5 antibody [EP1601Y] (Alexa Fluor® 647). Please refer to ab193895 for protocol details.
ab193895 staining Cytokeratin 5 in A431 cells. The cells were fixed with 4% formaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab193895 at 1/100 dilution (shown in red) and ab195887, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 488), at 1/250 dilution (shown in green). Nuclear DNA was labelled with DAPI (shown in blue). Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

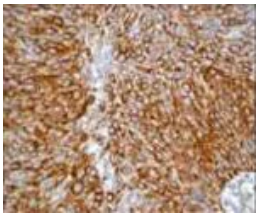
This product also gave a positive signal under the same testing conditions in A431 cells fixed with 100% methanol (5min).



Flow Cytometry (Intracellular) - Anti-Cytokeratin 5 antibody [EP1601Y] - BSA and Azide free (ab214586)

Cytokeratin 5 Flow Cytometry (Intracellular) staining using rabbit Anti-Cytokeratin 5 antibody

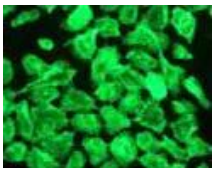
Intracellular Flow Cytometry analysis of A431 (human epidermoid carcinoma) cells labelling Cytokeratin 5 with purified ab52635 at 1/20 (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. An Alexa Fluor®488-conjugated goat anti-rabbit IgG (1/2000) was used as the secondary antibody. Black - Isotype control, rabbit monoclonal IgG. Blue - Unlabelled control, cells without incubation with primary and secondary antibodies.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52635).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 5 antibody [EP1601Y] - BSA and Azide free (ab214586)

Cytokeratin 5 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cytokeratin 5 antibody

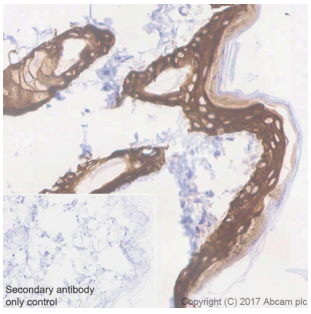
Human transitional urinary bladder carcinoma stained with unpurified ab52635 at 1/100 - 1/250 dilution.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52635).



Immunocytochemistry/ Immunofluorescence - Anti-Cytokeratin 5 antibody [EP1601Y] - BSA and Azide free (ab214586)

Cytokeratin 5 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Cytokeratin 5 antibody

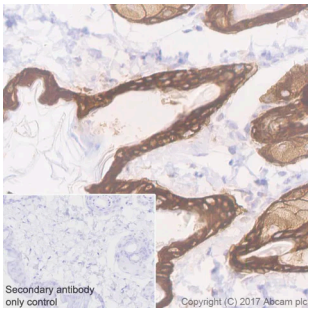
A431 cells stained with unpurified ab52635 at 1/100 - 1/250
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52635).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 5 antibody [EP1601Y] - BSA and Azide free (ab214586)

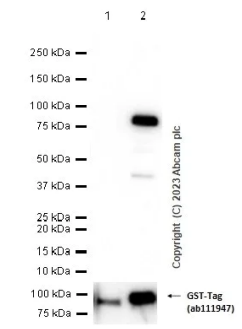
Cytokeratin 5 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cytokeratin 5 antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat skin tissue sections labeling Cytokeratin 5 with Purified ab52635 at 1:200 dilution. Heat mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer, pH 9.0). Tissue was counterstained with Hematoxylin. ImmunoHistoProbe one step HRP Polymer (ready to use) secondary antibody was used. PBS instead of the primary antibody was used as the negative control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52635).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 5 antibody [EP1601Y] - BSA and Azide free (ab214586)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse skin tissue sections labeling Cytokeratin 5 with Purified ab52635 at 1:200 dilution. Heat mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer, pH 9.0). Tissue was counterstained with Hematoxylin. ImmunoHistoProbe one step HRP Polymer (ready to use) secondary antibody was used. PBS instead of the primary antibody was used as the negative control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52635).



Western blot - Anti-Cytokeratin 5 antibody [EP1601Y] - BSA and Azide free (ab214586)

Blocking buffer: 5% NFDM /TBST.
All lanes:
Western blot - Anti-Cytokeratin 5 antibody [EP1601Y] - Cytoskeleton Marker (ab52635) at 1/1000 dilution

Lane 1:
N-GST tagged full-length recombinant human Cytokeratin 6A protein at 10 ng

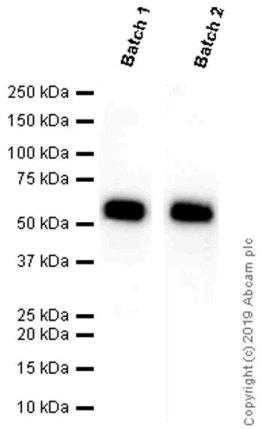
Lane 2:
N-GST tagged full-length recombinant human Cytokeratin 5 protein at 10 ng

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Observed band size: 87 kDa

Exposure time: 10s

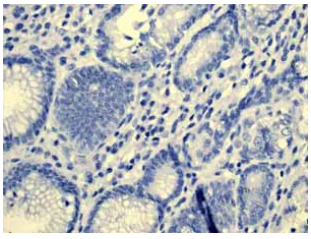


Western blot - Anti-Cytokeratin 5 antibody [EP1601Y] - BSA and Azide free (ab214586)

Cytokeratin 5 Western blot staining using rabbit Anti-Cytokeratin 5 antibody

This data was developed using ab52635, the same antibody clone in a different buffer formulation. Different batches of ab52635 were tested on Rat skin lysate at 1.0 µg/ml. 15 µg of lysate was loaded in each lane. Bands observed at 62 kDa.
All lanes:
Western blot - Anti-Cytokeratin 5 antibody [EP1601Y] - Cytoskeleton Marker (ab52635)

Predicted band size: 62 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 5 antibody [EP1601Y] - BSA and Azide free (ab214586)

Unpurified ab52635 showing negative staining in stomach adenocarcinoma tissue.

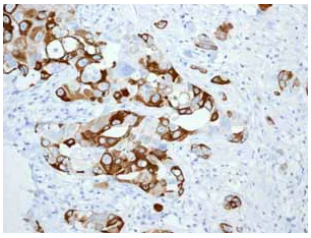
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52635).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 5 antibody [EP1601Y] - BSA and Azide free (ab214586)

Unpurified ab52635 showing positive staining in squamous cell lung carcinoma tissue.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52635).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 5 antibody [EP1601Y] - BSA and Azide free (ab214586)

This IHC data was generated using the same anti-Cytokeratin 5 antibody clone, EP1601Y, in a different buffer formulation (cat# ab52635).
ab52635 showing positive staining in basal cell breast carcinoma tissue.

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