abcam

ab239850

Anti-Cytokeratin 15 antibody [EPR1614Y] - BSA and Azide free

Recombinant | RabMAb | KO Validated

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	EPR1614Y
Purification technique	Affinity purification Protein A
Dissociation constant	5.6 x 10^{-10} M
Concentration	1.014 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human

Dilution info	-
Notes	-

Expected

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

IP

Not recommended

Species	Mouse, Human
Dilution info	-
Notes	-

WB

Tested

Species	Human, Mouse
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.

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
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information KRT15

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

ab239850 is the carrier-free version of ab52816.

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.

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.

Supplementary info

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

Activity summary	Cytokeratin 15 often abbreviated as CK15 bsa-15 or keratin 15 is an intermediate filament protein known for its role in the structural integrity of epithelial cells. It weighs approximately 50 kilodaltons. This protein is mainly expressed in the basal layer of stratified squamous epithelia such as the epidermis and the hair follicle. CK15 is an essential part of the cytoskeleton contributing to cell shape and mechanical resilience.
Biological function summary	CK15 plays a significant role in maintaining epithelial stem cell populations. It is part of the keratin protein family where it forms a complex network with other cytokeratins to support epithelial cell stability. CK15 has been shown to mark epithelial progenitor cells hinting at its role in tissue regeneration and repair. Its expression levels often reflect the cellular origin and differentiation state particularly in the skin and associated structures.
Pathways	CK15 is involved in pathways related to epithelial cell differentiation and homeostasis. It interacts within the cytoskeletal network alongside other cytokeratins like keratin 5. CK15 contributes to pathways that regulate cell proliferation and differentiation. It participates in the wound healing process where keratin 6 and keratin 17 also play important roles. This involvement allows it to impact how epithelial cells respond to and repair after damage.
Associated diseases and disorders	CK15 has been associated with skin disorders and certain types of cancers. Its expression is often altered in squamous cell carcinoma and basal cell carcinoma where abnormal CK15 levels can influence tumor behavior. Additionally changes in CK15 expression are linked to alopecia relating it to proteins like keratin 5 and keratin 8 which have similar expression patterns in hair follicles. Understanding

CK15's role may aid in developing biomarkers for diagnosis and therapeutic targets.

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

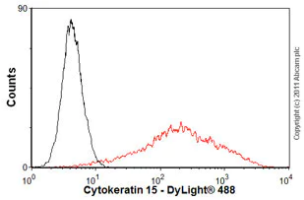
We do not recommend this combination. It is not covered by our product promise.

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.

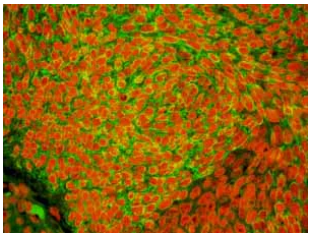
7 product images



Flow Cytometry (Intracellular) - Anti-Cytokeratin 15 antibody [EPR1614Y] - BSA and Azide free (ab239850)

Cytokeratin 15 Flow Cytometry (Intracellular) staining using rabbit Anti-Cytokeratin 15 antibody

Overlay histogram showing A431 cells stained with ab52816 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Triton 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 (ab52816, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-rabbit IgG (H+L) (ab96899) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was was rabbit IgG (monoclonal) (1µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in A431 cells fixed with 4% paraformaldehyde/permeabilized in 0.1% PBS-Triton used under the same conditions. This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52816).



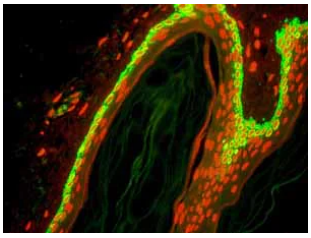
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 15 antibody [EPR1614Y] - BSA and Azide free (ab239850)

Cytokeratin 15 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cytokeratin 15 antibody

Fluorescent immunohistochemical analysis of paraffin-embedded human cervical carcinoma tissue using ab52816. Green-CK15 red-PI.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52816).

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



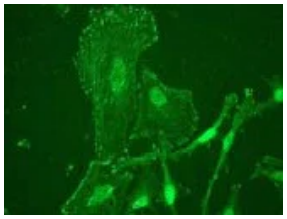
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 15 antibody [EPR1614Y] - BSA and Azide free (ab239850)

Cytokeratin 15 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cytokeratin 15 antibody

Fluorescent immunohistochemical analysis of paraffin-embedded human normal skin tissue using ab52816. Green-CK15 red-PI

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52816).

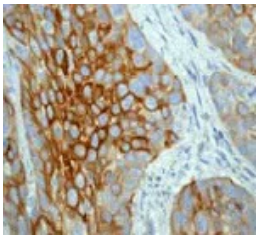
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-Cytokeratin 15 antibody [EPR1614Y] - BSA and Azide free (ab239850)

Cytokeratin 15 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Cytokeratin 15 antibody

ab52816 at 1/50 dilution staining Cytokeratin 15 in HeLa cells by Immunocytochemistry.This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52816).

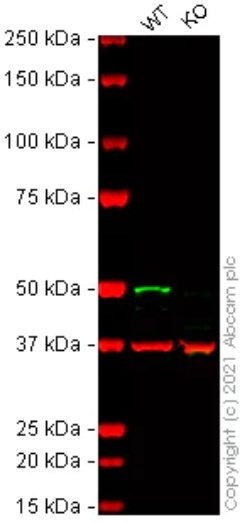


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cytokeratin 15 antibody [EPR1614Y] - BSA and Azide free (ab239850)

Cytokeratin 15 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Cytokeratin 15 antibody

ab52816 at 1/100 dilution staining Cytokeratin 15 in human squamous cervical carcinoma by Immunohistochemistry, Paraffin embedded tissue.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52816).

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Western blot - Anti-Cytokeratin 15 antibody [EPR1614Y] - BSA and Azide free (ab239850)

Cytokeratin 15 Western blot staining using rabbit Anti-Cytokeratin 15 antibody

This data was developed using the same antibody clone in a different buffer formulation (ab52816).
Lanes 1 - 2: Merged signal (red and green). Green - ab52816 observed at 50 kDa. Red - loading control ab8245 (Mouse anti-GAPDH antibody [6C5]) observed at 37 kDa.

ab52816 was shown to react with Cytokeratin 15 in wild-type A431 cells in Western blot with loss of signal observed in KRT15 knockout cell line ab263922 (knockout cell lysate ab262484). Wild-type A431 and KRT15 knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3 % milk in TBS-T (0.1 % Tween®) before incubation with ab52816 and ab8245 (Mouse anti-GAPDH antibody [6C5]) overnight at 4 °C at a 1 in 10000 dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 h at room temperature before imaging.

All lanes:
Western blot - Anti-Cytokeratin 15 antibody [EPR1614Y] (ab52816) at 1/10000 dilution

Lane 1:
Wild-type A431 cell lysate at 20 µg

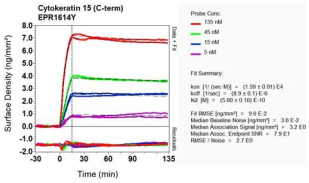
Lane 2:
KRT15 knockout A431 cell lysate at 20 µg

Lane 2:
Western blot - Human KRT15 knockout A-431 cell line (ab262484)

Performed under reducing conditions.

Predicted band size: 49 kDa

Observed band size: 50 kDa



OI-RD Scanning - Anti-Cytokeratin 15 antibody [EPR1614Y] - BSA and Azide free (ab239850)

We have systematically measured KD (the equilibrium dissociation constant between the antibody and its antigen), of more than 840 recombinant antibodies to assess not only their individual KD values but also to see the average affinity of antibody. Based on the comparison with published literature values for mouse monoclonal antibodies, Recombinant antibodies appear to be on average 1-2 order of magnitude higher affinity.

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