abcam

ab51056

# Anti-Cytokeratin 17 antibody [EPR1624Y]

Recombinant | RabMAb

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Clone number** | EPR1624Y |
| **Purification technique** | Affinity purification Protein A |
| **Specificity** | The immunogen used for this product shares 78.6% homology with KRT36 and KRT24. Cross-reactivity with these proteins has not been confirmed experimentally. |
| **Dissociation constant** | $2.47 \times 10^{-10}$ M |
| **Concentration** | 0.088 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## IHC-P

### Tested

| | |
|---|---|
| **Species** | Human |

| | |
|---|---|
| **Dilution info** | 1/400 |
| **Notes** | **For unpurified use at 1/50 - 1/100.**<br>Perform heat-mediated antigen retrieval before commencing with IHC staining protocol. |

## IP

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/20 |
| **Notes** | **For unpurified use at 1/30** |

## WB

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/1000 |
| **Notes** | **For unpurified use at 1/10000.** |

## ICC/IF

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/250 |
| **Notes** | **For unpurified use at 1/50 - 1/100** |

## Flow Cyt (Intra)

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/20 |
| **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 duration** | 1-2 weeks |
| **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

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

**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.

## 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/β-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.

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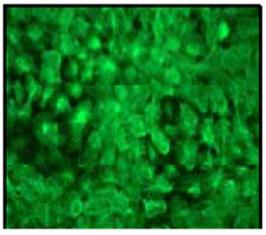
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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## 6 product images

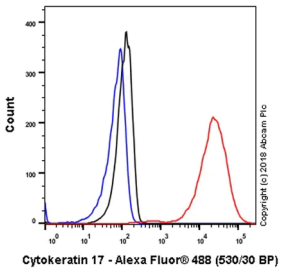


### Immunocytochemistry/ Immunofluorescence - Anti-Cytokeratin 17 antibody [EPR1624Y] (ab51056)

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

Immunofluorescent staining of A431 cells using unpurified ab51056 (1/50).

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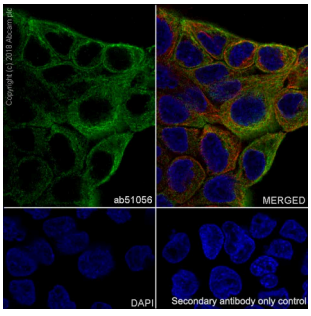



### Flow Cytometry (Intracellular) - Anti-Cytokeratin 17 antibody [EPR1624Y] (ab51056)

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

Intracellular Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling Cytokeratin 17 with Purified ab51056 at 1/20 dilution (10 µg/ml) (red). Cells were fixed with 4% Paraformaldehyde. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).

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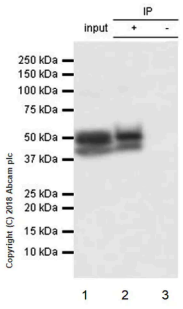



### Immunocytochemistry/ Immunofluorescence - Anti-Cytokeratin 17 antibody [EPR1624Y] (ab51056)

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

Immunocytochemistry/ Immunofluorescence analysis of A431 (human epidermoid carcinoma epithelial cell) cells labeling Cytokeratin 17 with Purified ab51056 at 1:250 dilution (0.4 µg/ml). 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). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.

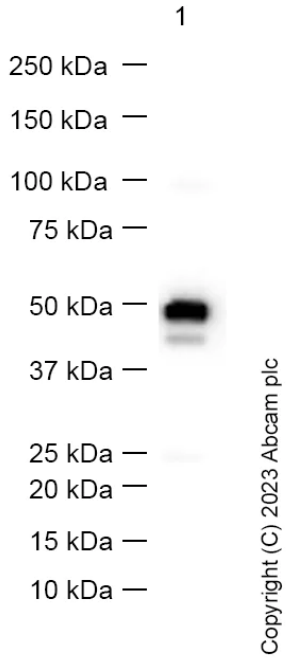
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## Immunoprecipitation - Anti-Cytokeratin 17 antibody [EPR1624Y] (ab51056)

ab51056 (purified) at 1:20 dilution (1µg) immunoprecipitating Cytokeratin 17 in HeLa whole cell lysate.
Lane 1 (input): HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate 10µg
Lane 2 (+): ab51056 & HeLa whole cell lysate
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab51056 in HeLa whole cell lysate
For western blotting, VeriBlot for IP Detection Reagent (HRP) (ab131366) was used for detection at 1:1000 dilution.
Blocking and diluting buffer: 5% NFDM/TBST.
All lanes:
Immunoprecipitation - Anti-Cytokeratin 17 antibody [EPR1624Y] (ab51056)

Predicted band size: 48 kDa




## Western blot - Anti-Cytokeratin 17 antibody [EPR1624Y] (ab51056)

Blocking and diluting buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-Cytokeratin 17 antibody [EPR1624Y] (ab51056) at 1/1000 dilution

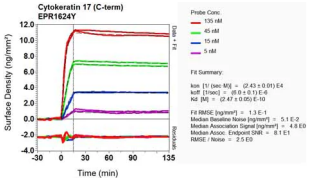
All lanes:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Secondary

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

Predicted band size: 50 kDa

Exposure time: 1s




## OI-RD Scanning - Anti-Cytokeratin 17 antibody [EPR1624Y] (ab51056)

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'.