

# Cytokeratin 17 (D-4): sc-393091



The Power to Question

## BACKGROUND

Cytokeratin 17 is a member of the Cytokeratin subfamily of intermediate filament proteins (IFPs). It is unique in that it is normally expressed in the basal cells of complex epithelia but not in stratified or simple epithelia. Cytokeratin 17 contains 432 amino acids and is expressed in the nail bed, hair follicle, sebaceous glands and other epidermal appendages. Cytokeratin 17 functions to regulate cell growth and size through its interactions with the adaptor protein 14-3-3- $\sigma$  to mediate protein synthesis. Mutations in the gene encoding for Cytokeratin 17 lead to depressed protein translation and smaller sized skin keratinocytes, corresponding to decreased Akt/mTOR signaling activity. Cytokeratin 17 may be a useful marker for cervical stem cell identification, squamous cell carcinoma of the larynx, respiratory syncytial virus and transitional cell carcinomas of the human urinary tract.

## REFERENCES

- Guelstein, V.I., et al. 1993. Immunohistochemical localization of Cytokeratin 17 in transitional cell carcinomas of the human urinary tract. *Virchows Arch. B, Cell Pathol. Incl. Mol. Pathol.* 64: 1-5.
- Troyanovsky, S.M. and Leube, R.E. 1994. Activation of the silent human Cytokeratin 17 pseudogene-promoter region by cryptic enhancer elements of the Cytokeratin 17 gene. *Eur. J. Biochem.* 225: 61-69.

## CHROMOSOMAL LOCATION

Genetic locus: KRT17 (human) mapping to 17q21.2; Krt17 (mouse) mapping to 11 D.

## SOURCE

Cytokeratin 17 (D-4) is a mouse monoclonal antibody raised against amino acids 392-432 mapping at the C-terminus of Cytokeratin 17 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Cytokeratin 17 (D-4) is recommended for detection of Cytokeratin 17 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Cytokeratin 17 siRNA (h): sc-43311, Cytokeratin 17 siRNA (m): sc-43312, Cytokeratin 17 shRNA Plasmid (h): sc-43311-SH, Cytokeratin 17 shRNA Plasmid (m): sc-43312-SH, Cytokeratin 17 shRNA (h) Lentiviral Particles: sc-43311-V and Cytokeratin 17 shRNA (m) Lentiviral Particles: sc-43312-V.

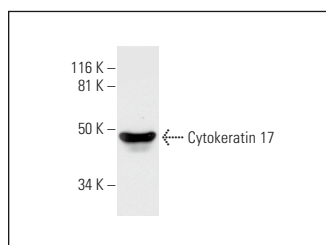
Molecular Weight of Cytokeratin 17: 46 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

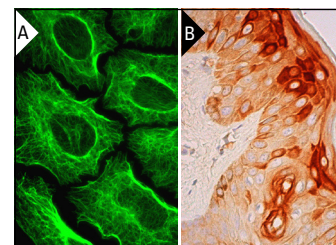
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



Cytokeratin 17 (D-4): sc-393091. Western blot analysis of Cytokeratin 17 expression in HeLa whole cell lysate.



Cytokeratin 17 (D-4): sc-393091. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoskeletal localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of keratinocytes, Langerhans cells and melanocytes (B).

## SELECT PRODUCT CITATIONS

- Xiao, L., et al. 2020. ERK1/2 pathway is involved in the enhancement of fatty acids from *Phaeodactylum tricornutum* extract (PTE) on hair follicle cell proliferation. *Biomed Res. Int.* 2020: 2916104.
- Li, Z., et al. 2021. Discovery and validation of novel biomarkers for detection of cervical cancer. *Cancer Med.* 10: 2063-2074.
- Jozic, I., et al. 2021. Glucocorticoid-mediated induction of caveolin-1 disrupts cytoskeletal organization, inhibits cell migration and re-epithelialization of non-healing wounds. *Commun. Biol.* 4: 757.
- Jung, S.Y., et al. 2022. Wnt-activating human skin organoid model of atopic dermatitis induced by *Staphylococcus aureus* and its protective effects by *Cutibacterium acnes*. *iScience* 25: 105150.
- Lee, J., et al. 2022. Generation and characterization of hair-bearing skin organoids from human pluripotent stem cells. *Nat. Protoc.* 17: 1266-1305.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.