

Cytokeratin 5 (RCK103): sc-32721

BACKGROUND

Cytokeratins comprise a diverse group of intermediate filament proteins (IFPs) that are expressed as pairs in both keratinized and non-keratinized epithelial tissue. Cytokeratins play a critical role in differentiation and tissue specialization and function to maintain the overall structural integrity of epithelial cells. Cytokeratins have been found to be useful markers of tissue differentiation which is directly applicable to the characterization of malignant tumors. Cytokeratin 5 is expressed in normal basal cells. Mutations of the Cytokeratin 5 gene (KRT5) have been shown to result in the autosomal dominant disorder epidermolysis bullosa (EB).

CHROMOSOMAL LOCATION

Genetic locus: KRT5 (human) mapping to 12q13.13; Krt5 (mouse) mapping to 15 F2.

SOURCE

Cytokeratin 5 (RCK103) is a mouse monoclonal antibody raised against cytokeratin of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Cytokeratin 5 (RCK103) is available conjugated to agarose (sc-32721 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-32721 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-32721 PE), fluorescein (sc-32721 FITC), Alexa Fluor[®] 488 (sc-32721 AF488), Alexa Fluor[®] 546 (sc-32721 AF546), Alexa Fluor[®] 594 (sc-32721 AF594) or Alexa Fluor[®] 647 (sc-32721 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-32721 AF680) or Alexa Fluor[®] 790 (sc-32721 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Cytokeratin 5 (RCK103) is recommended for detection of Cytokeratin 5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for Cytokeratin 5 siRNA (h): sc-35153, Cytokeratin 5 siRNA (m): sc-60041, Cytokeratin 5 shRNA Plasmid (h): sc-35153-SH, Cytokeratin 5 shRNA Plasmid (m): sc-60041-SH, Cytokeratin 5 shRNA (h) Lentiviral Particles: sc-35153-V and Cytokeratin 5 shRNA (m) Lentiviral Particles: sc-60041-V.

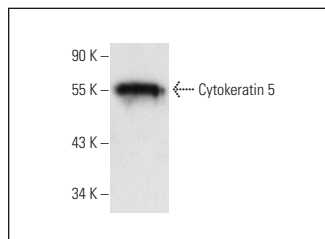
Molecular Weight of Cytokeratin 5: 58 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, DU 145 cell lysate: sc-2268 or Hep G2 cell lysate: sc-2227.

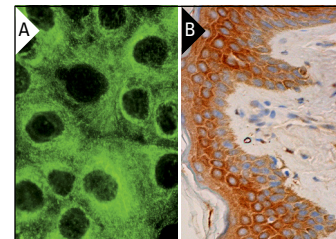
STORAGE

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

DATA



Cytokeratin 5 (RCK103): sc-32721. Western blot analysis of Cytokeratin 5 expression in HeLa whole cell lysate.



Cytokeratin 5 (RCK103): sc-32721. Immunofluorescence staining of methanol-fixed A-431 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

- Chen, Y.T., et al. 2007. Human amniotic epithelial cells as novel feeder layers for promoting *ex vivo* expansion of limbal epithelial progenitor cells. *Stem Cells* 25: 1995-2005.
- Floreth, T., et al. 2011. Differentiated transplant derived airway epithelial cell cytokine secretion is not regulated by cyclosporine. *Respir. Res.* 12: 44.
- Dubrovskaya, A., et al. 2012. CXCR4 expression in prostate cancer progenitor cells. *PLoS ONE* 7: e31226.
- White, S.R., et al. 2013. Human leukocyte antigen-G expression in differentiated human airway epithelial cells: lack of modulation by Th2-associated cytokines. *Respir. Res.* 14: 4.
- Sivan, U., et al. 2014. Constitution of fibrin-based niche for *in vitro* differentiation of adipose-derived mesenchymal stem cells to keratinocytes. *Biores. Open Access* 3: 339-347.
- Goodman, C.R., et al. 2016. Steroid induction of therapy-resistant Cytokeratin-5-positive cells in estrogen receptor-positive breast cancer through a Bcl6-dependent mechanism. *Oncogene* 35: 1373-1385.
- Chu, Y.W., et al. 2017. The cytotoxic mechanism of epigallocatechin gallate on proliferative HaCaT keratinocytes. *J. Biomed. Sci.* 24: 55.
- Chen, L., et al. 2018. PKK deletion in basal keratinocytes promotes tumorigenesis after chemical carcinogenesis. *Carcinogenesis* 39: 418-428.
- Xie, B., et al. 2018. Chemokine expression in the early response to injury in human airway epithelial cells. *PLoS ONE* 13: e0193334.
- Wang, R., et al. 2019. Establishment and characterization of a prostate cancer cell line from a prostatectomy specimen for the study of cellular interaction. *Int. J. Cancer* 145: 2249-2259.

RESEARCH USE

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