SANTA CRUZ BIOTECHNOLOGY, INC.

Cytokeratin 5/8 (RCK102): sc-32328

The Power to Question

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). Cytokeratin 8 expression is seen in epithelium and epithelium-derived tumors Cytokeratins 10 and 13 are expressed highly in a subset of squamous cell carcinomas while Cytokeratin 18 is expressed in a majority of adenocarcinomas and basal cell carcinomas.

CHROMOSOMAL LOCATION

Genetic locus: KRT5/KRT8 (human) mapping to 12q13.13; Krt5 (mouse) mapping to 15 F2, Krt8 (mouse) mapping to 15 F3.

SOURCE

Cytokeratin 5/8 (RCK102) is a mouse monoclonal antibody raised against the human lung cancer cell line, MR21.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Cytokeratin 5/8 (RCK102) is available conjugated to either phycoerythrin (sc-32328 PE) or fluorescein (sc-32328 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

Cytokeratin 5/8 (RCK102) is recommended for detection of Cytokeratin 5 and Cytokeratin 8 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 10^6 cells); may cross-react with Cytokeratin 18.

Molecular Weight of Cytokeratin 5: 58 kDa.

Molecular Weight of Cytokeratin 8: 55 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, MCF7 whole cell lysate: sc-2206 or Hep G2 cell lysate: sc-2227.

RESEARCH USE

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

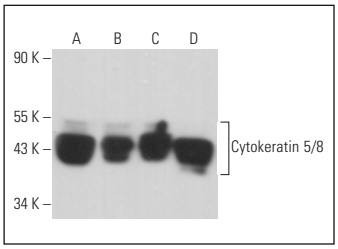
PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

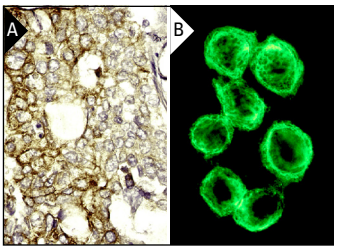
STORAGE

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

DATA



Cytokeratin 5/8 (RCK102): sc-32328. Western blot analysis of Cytokeratin 5/8 expression in Hep G2 (**A**), HeLa (**B**), MCF7 (**C**) and SK-BR-3 (**D**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



Cytokeratin 5/8 (RCK102): sc-32328. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tumor showing cytoskeletal localization (**A**). Immunofluorescence staining of methanol-fixed HeLa cells showing cytoskeletal localization (**B**).

SELECT PRODUCT CITATIONS

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2. Garrett, W.S., et al. 2007. Communicable ulcerative colitis induced by T-bet deficiency in the innate immune system. Cell 131: 33-45.
3. Peters, T., et al. 2011. Mouse model of foreign body reaction that alters the submesothelium and transperitoneal transport. Am. J. Physiol. Renal Physiol. 300: F283-F289.
4. Ordóñez, N.G. 2013. Broad-spectrum immunohistochemical epithelial markers: a review. Hum. Pathol. 44: 1195-1215.
5. Shah, K. and Bradbury, N.A. 2015. Lemur tyrosine kinase 2, a novel target in prostate cancer therapy. Oncotarget 6: 14233-14246.
6. Rapozo, D.C., et al. 2016. Recurrent acute thermal lesion induces esophageal hyperproliferative premalignant lesions in mice esophagus. Exp. Mol. Pathol. 100: 325-331.
7. Parmaksiz, M., et al. 2017. Decellularization of bovine small intestinal submucosa and its use for the healing of a critical-sized full-thickness skin defect, alone and in combination with stem cells, in a small rodent model. J. Tissue Eng. Regen. Med. 11: 1754-1765.
8. Janardhan, K.S., et al. 2018. Immunohistochemistry in investigative and toxicologic pathology. Toxicol. Pathol. 46: 488-510.
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10. Sun, F., et al. 2022. Placenta-specific miR-125b overexpression leads to increased rates of pregnancy loss in mice. Int. J. Mol. Sci. 23: 943.

See **pan-Cytokeratin (C11): sc-8018** for pan-Cytokeratin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.