SANTA CRUZ BIOTECHNOLOGY, INC.

Cytokeratin 7 (RCK105): sc-23876

SANTA CRUZ BIOTECHNOLOGY

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, where they constitute up to 85% of mature keratinocytes in the vertebrate epidermis. Cytokeratins play a critical role in differentiation and tissue specialization and function to maintain the overall structural integrity of epithelial cells. The α-helical coiled-coil dimers associate laterally end-to-end to form ten nm diameter filaments. Cytokeratins are useful markers of tissue differentiation and, in addition, they aid in the characterization of malignant tumors. Cytokeratin 7 (also known as sarcolectin) agglutinates normal and transformed cells with a high affinity for simple sugars. Cytokeratin 7 also inhibits the synthesis of interferon-dependent secondary proteins thus reversing the antiviral effect of interferon induction and restoring cells to their status ad primum. In normal and transformed cells, Cytokeratin 7 localizes to the membrane.

CHROMOSOMAL LOCATION

Genetic locus: KRT7 (human) mapping to 12q13.13; Krt7 (mouse) mapping to 15 F2.

SOURCE

Cytokeratin 7 (RCK105) is a mouse monoclonal antibody raised against T24 cells of human origin.

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 7 (RCK105) is available conjugated to agarose (sc-23876 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-23876 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-23876 PE), fluorescein (sc-23876 FITC), Alexa Fluor® 488 (sc-23876 AF488), Alexa Fluor® 546 (sc-23876 AF546), Alexa Fluor® 594 (sc-23876 AF594) or Alexa Fluor® 647 (sc-23876 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-23876 AF680) or Alexa Fluor® 790 (sc-23876 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Cytokeratin 7 (RCK105) is recommended for detection of Cytokeratin 7 of mouse, rat, human, hamster, canine and porcine origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000), 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).

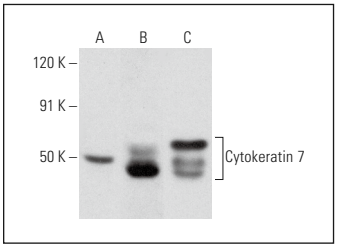
Suitable for use as control antibody for Cytokeratin 7 siRNA (h): sc-35154, Cytokeratin 7 siRNA (m): sc-35155, Cytokeratin 7 shRNA Plasmid (h): sc-35154-SH, Cytokeratin 7 shRNA Plasmid (m): sc-35155-SH, Cytokeratin 7 shRNA (h) Lentiviral Particles: sc-35154-V and Cytokeratin 7 shRNA (m) Lentiviral Particles: sc-35155-V.

Molecular Weight of Cytokeratin 7: 54 kDa.

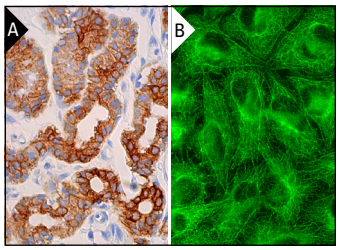
STORAGE

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

DATA



Cytokeratin 7 (RCK105): sc-23876. Western blot analysis of Cytokeratin 7 expression in Hep G2 (**A**), RIN-m5F (**B**) and MDCK (**C**) whole cell lysates.



Cytokeratin 7 (RCK105): sc-23876. Immunoperoxidase staining of formalin fixed, paraffin-embedded human salivary gland tissue showing cytoplasmic and membrane staining of glandular cells (**A**). Immunofluorescence staining of methanol-fixed HeLa cells showing cytoskeletal localization (**B**).

SELECT PRODUCT CITATIONS

1. Aaboe, M., et al. 2005. Gene expression profiling of noninvasive primary urothelial tumours using microarrays. Br. J. Cancer 93: 1182-1190.
2. Quesada, R., et al. 2014. Radiofrequency pancreatic ablation and section of the main pancreatic duct does not lead to necrotizing pancreatitis. Pancreas 43: 931-937.
3. Aghababaei, M., et al. 2015. ADAM12-directed ectodomain shedding of E-cadherin potentiates trophoblast fusion. Cell Death Differ. 22: 1970-1984.
4. Loyola, A.M., et al. 2016. Ameloblastic carcinoma: a Brazilian collaborative study of 17 cases. Histopathology 69: 687-701.
5. Jiang, M., et al. 2017. Transitional basal cells at the squamous-columnar junction generate Barrett's oesophagus. Nature 550: 529-533.
6. Shin, H.Y., et al. 2018. Establishment of five immortalized human ovarian surface epithelial cell lines via SV40 T antigen or HPV E6/E7 expression. PLoS ONE 13: e0205297.
7. Xie, L., et al. 2019. Effects of neoadjuvant FOLFIRINOX and gemcitabine-based chemotherapy on cancer cell survival and death in patients with pancreatic ductal adenocarcinoma. Oncotarget 10: 7276-7287.
8. Zhang, X., et al. 2020. Rapid exacerbation featuring acute leukemoid reaction after retrolaparoscopic nephrectomy: a rare case report of renal cell carcinoma with postoperative comprehensive genomic profiling. World J. Surg. Oncol. 18: 155.
9. Chumduri, C., et al. 2021. Opposing Wnt signals regulate cervical squamocolumnar homeostasis and emergence of metaplasia. Nat. Cell Biol. 23: 184-197.

RESEARCH USE

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