

# Cytokeratin 19 (RCK108): sc-53003

## 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 and have been found to be useful markers of tissue differentiation, which is directly applicable to the characterization of malignant tumors. For example, many types of cancer cells express Cytokeratin 19 (CK19), an epithelial cytoskeletal protein within the suprabasal squamous epithelium. Cytokeratin 19 is a specific marker of moderate to severe dysplasia and carcinoma *in situ* in oral cavity squamous epithelium, and measurement of Cytokeratin 19 may be a useful marker in diagnosing hepatoma. Cytokeratin 19 fragment levels in serum have been documented as a marker for lung cancer. Clinical investigations have suggested that serum CYFRA 21-1, a fragment of Cytokeratin 19, may be among the most useful tumor markers.

## REFERENCES

1. Van Eyken, P., et al. 1991. Immunocytochemistry of cytokeratins in primary human liver tumors. *APMIS Suppl.* 23: 77-85.
2. Coltrera, M.D., et al. 1992. Markers for dysplasia of the upper aerodigestive tract. Suprabasal expression of PCNA, p53 and CK19 in alcohol-fixed, embedded tissue. *Am. J. Pathol.* 141: 817-825.

## CHROMOSOMAL LOCATION

Genetic locus: KRT19 (human) mapping to 17q21.2.

## SOURCE

Cytokeratin 19 (RCK108) is a mouse monoclonal antibody raised against bladder carcinoma cell line T24 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Cytokeratin 19 (RCK108) is available conjugated to agarose (sc-53003 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53003 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53003 PE), fluorescein (sc-53003 FITC), Alexa Fluor<sup>®</sup> 488 (sc-53003 AF488), Alexa Fluor<sup>®</sup> 546 (sc-53003 AF546), Alexa Fluor<sup>®</sup> 594 (sc-53003 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-53003 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-53003 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-53003 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, Cytokeratin 19 (RCK108) is available conjugated to either PerCP (sc-53003 PerCP) or PerCP-Cy5.5 (sc-53003 PCPC5), 100 tests in 2 ml, for IF, IHC(P) and FCM.

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## STORAGE

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

## APPLICATIONS

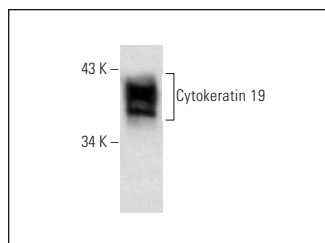
Cytokeratin 19 (RCK108) is recommended for detection of Cytokeratin 19 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 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<sup>6</sup> cells).

Suitable for use as control antibody for Cytokeratin 19 siRNA (h): sc-35152, Cytokeratin 19 shRNA Plasmid (h): sc-35152-SH and Cytokeratin 19 shRNA (h) Lentiviral Particles: sc-35152-V.

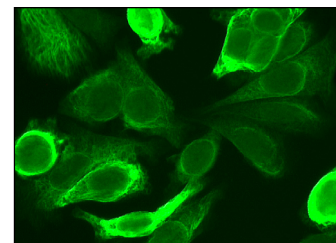
Molecular Weight of Cytokeratin 19: 40 kDa.

Positive Controls: Caco-2 cell lysate: sc-2262.

## DATA



Cytokeratin 19 (RCK108): sc-53003. Western blot analysis of Cytokeratin 19 expression in Caco-2 whole cell lysate immunoprecipitated with Cytokeratin 19 (RCK108): sc-53003 and detected with Cytokeratin 19 (A53-B/A2): sc-6278.



Cytokeratin 19 (RCK108) Alexa Fluor<sup>®</sup> 488: sc-53003 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing cytoskeletal localization. Blocked with UltraCruz<sup>®</sup> Blocking Reagent: sc-516214.

## SELECT PRODUCT CITATIONS

1. Pontiggia, L., et al. 2009. Markers to evaluate the quality and self-renewing potential of engineered human skin substitutes *in vitro* and after transplantation. *J. Invest. Dermatol.* 129: 480-490.
2. Chen, S.R., et al. 2013. The Wilms tumor gene, *Wt1*, maintains testicular cord integrity by regulating the expression of *Col4a1* and *Col4a2*. *Biol. Reprod.* 88: 56.
3. Battistella, M., et al. 2014. PHLDA1, a follicular stem cell marker, differentiates clear-cell/granular-cell trichoblastoma and clear-cell/granular cell basal cell carcinoma: a case-control study, with first description of granular-cell trichoblastoma. *Am. J. Dermatopathol.* 36: 643-650.
4. Jing, Z., et al. 2016. Downregulation of Syndecan-1 induce glomerular endothelial cell dysfunction through modulating internalization of VEGFR-2. *Cell. Signal.* 28: 826-837.
5. Machiguchi, T. and Nakamura, T. 2019. Nephron generation in kidney cortices through injection of pretreated mesenchymal stem cell-differentiated tubular epithelial cells. *Biochem. Biophys. Res. Commun.* 518: 141-147.

## RESEARCH USE

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