

# Cytokeratin 7 (LP1K): sc-53263

## 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  $\alpha$ -helical coiled-coil dimers associate laterally end-to-end to form 10 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 (LP1K) is a mouse monoclonal antibody raised against SV40 transformed neonatal keratinocytes 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 7 (LP1K) is recommended for detection of Cytokeratin 7 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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.

Positive Controls: RIN-m5F whole cell lysate: sc-364792, HeLa whole cell lysate: sc-2200 or NRK whole cell lysate: sc-364197.

## RESEARCH USE

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

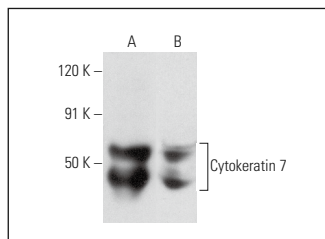
## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

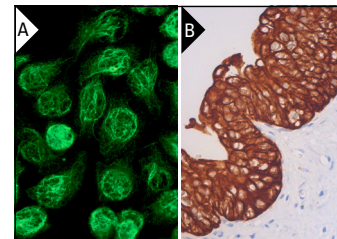
## STORAGE

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

## DATA



Cytokeratin 7 (LP1K): sc-53263. Western blot analysis of Cytokeratin 7 expression in RIN-m5F (A) and NRK (B) whole cell lysates.



Cytokeratin 7 (LP1K): sc-53263. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoskeletal localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing cytoplasmic and membrane staining of urothelial cells (B).

## SELECT PRODUCT CITATIONS

- Guye, P., et al. 2016. Genetically engineering self-organization of human pluripotent stem cells into a liver bud-like tissue using Gata6. *Nat. Commun.* 7: 10243.
- Hu, T., et al. 2016. Aryl hydrocarbon receptor negatively regulates lipid synthesis and involves in cell differentiation of SZ95 sebocytes *in vitro*. *Chem. Biol. Interact.* 258: 52-58.
- Xu, Y., et al. 2018. Transcription coactivator Cited1 acts as an inducer of trophoblast-like state from mouse embryonic stem cells through the activation of BMP signaling. *Cell Death Dis.* 9: 924.
- Krishnan, A., et al. 2020. TRAIL receptor deficiency promotes the ductular reaction, macrophage accumulation and hepatic fibrosis in the *Mdr2*<sup>-/-</sup> mouse. *Am. J. Pathol.* 190: 1284-1297.
- Tanabe, A., et al. 2022. YTHDC2 promotes malignant phenotypes of breast cancer cells. *J. Oncol.* 2022: 9188920.
- Ding, X., et al. 2022. Establishment and characterization of a new human intrahepatic cholangiocarcinoma cell line LIV27. *Cancers* 14: 5080.
- Kang, J.H., et al. 2023. The epigenetic reader, bromodomain containing 2, mediates cholangiocyte senescence via interaction with ETS proto-oncogene 1. *Gastroenterology* 165: 228-243.e2.
- Krishnan, A., et al. 2024. Tumor necrosis factor-related apoptosis-inducing ligand (TRAIL) deletion in myeloid cells augments cholestatic liver injury. *Sci. Rep.* 14: 2145.



See **Cytokeratin 7 (RCK105): sc-23876** for Cytokeratin 7 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor<sup>®</sup> 488, 546, 594, 647, 680 and 790.