

# Cytokeratin 7 (5F282): sc-70936

## 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 (5F282) is a mouse monoclonal antibody raised against T24 cells 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.

Cytokeratin 7 (5F282) is available conjugated to either phycoerythrin (sc-70936 PE) or fluorescein (sc-70936 FITC), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM.

## APPLICATIONS

Cytokeratin 7 (5F282) 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  $\mu$ 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> 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.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or T24 cell lysate: sc-2292.

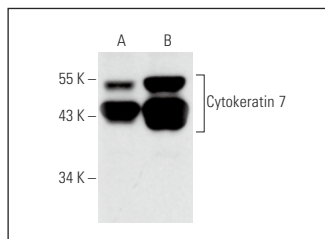
## RESEARCH USE

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

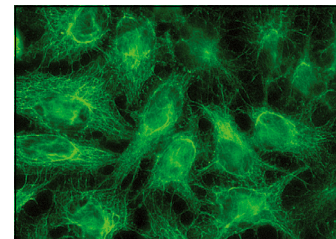
## STORAGE

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

## DATA



Cytokeratin 7 (5F282): sc-70936. Western blot analysis of Cytokeratin 7 expression in HeLa (A) and T24 (B) whole cell lysates.



Cytokeratin 7 (5F282): sc-70936. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoskeletal localization.

## SELECT PRODUCT CITATIONS

- Wu, H.X., et al. 2010. Functional regulation of thymic stromal lymphopoietin on proliferation and invasion of trophoblasts in human first-trimester pregnancy. *Hum. Reprod.* 25: 1146-1152.
- Dahlhoff, M., et al. 2013. PLIN2, the major perilipin regulated during sebocyte differentiation, controls sebaceous lipid accumulation *in vitro* and sebaceous gland size *in vivo*. *Biochim. Biophys. Acta* 1830: 4642-4649.
- Karaca, G., et al. 2014. TWEAK/Fn14 signaling is required for liver regeneration after partial hepatectomy in mice. *PLoS ONE* 9: e83987.
- Morales, A., et al. 2016. Molecular expression of vascular endothelial growth factor, prokineticin receptor-1 and other biomarkers in infiltrating canalicular carcinoma of the breast. *Oncol. Lett.* 12: 2720-2727.
- Kaushal, J.B., et al. 2017. The regulation of Hh/Gli1 signaling cascade involves Gsk3 $\beta$ -mediated mechanism in estrogen-derived endometrial hyperplasia. *Sci. Rep.* 7: 6557.
- Rizvi, S., et al. 2017. YAP-associated chromosomal instability and cholangiocarcinoma in mice. *Oncotarget* 9: 5892-5905.
- Tashireva, L.A., et al. 2020. Single tumor cells with epithelial-like morphology are associated with breast cancer metastasis. *Front. Oncol.* 10: 50.
- Alahari, S., et al. 2021. JMJD6 dysfunction due to iron deficiency in preeclampsia disrupts fibronectin homeostasis resulting in diminished trophoblast migration. *Front. Cell Dev. Biol.* 9: 652607.
- Ruan, D., et al. 2022. Human early syncytiotrophoblasts are highly susceptible to SARS-CoV-2 infection. *Cell Rep. Med.* 3: 100849.
- da Silva Nunes Barreto, R., et al. 2023. Placental scaffolds as a potential biological platform for embryonic stem cells differentiation into hepatic-like cells lineage: a pilot study. *Tissue Cell* 84: 102181.

## PROTOCOLS

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