

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 α -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 μ g IgG₁ 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 μ 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 μ g per 100-500 μ 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 μ g per 1 x 10⁶ 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.

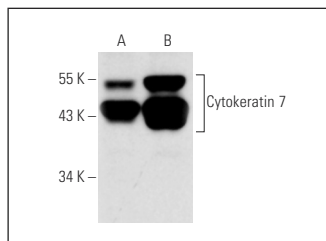
RESEARCH USE

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

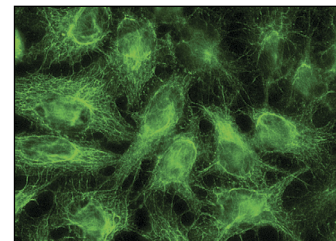
STORAGE

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

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4. Hsiao, Y.L., et al. 2014. Characterization of protein marker expression, tumorigenicity, and doxorubicin chemoresistance in two new canine mammary tumor cell lines. *BMC Vet. Res.* 10: 229.
5. 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.
6. Kaushal, J.B., et al. 2017. The regulation of Hh/Gli1 signaling cascade involves Gsk3 β -mediated mechanism in estrogen-derived endometrial hyperplasia. *Sci. Rep.* 7: 6557.
7. Yan, H., et al. 2017. Methotrexate induces apoptosis of postpartum placental cytotrophoblasts. *Cells Tissues Organs* 203: 231-242.
8. Rizvi, S., et al. 2017. YAP-associated chromosomal instability and cholangiocarcinoma in mice. *Oncotarget* 9: 5892-5905.
9. 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.
10. Ruan, D., et al. 2022. Human early syncytiotrophoblasts are highly susceptible to SARS-CoV-2 infection. *Cell Rep. Med.* E-published.

PROTOCOLS

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