

Cytokeratin 7 (H-50): sc-25721

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.

REFERENCES

1. Moll, R., et al. 1982. The catalog of human cytokeratins: patterns of expression in normal epithelia, tumors and cultured cells. *Cell* 31: 11-24.
2. Lane, E.B., et al. 1985. Keratin antigens in differentiating skin. *Ann. N.Y. Acad. Sci.* 455241-455258.
3. Osborn, M., et al. 1986. Differential diagnosis of gastrointestinal carcinomas by using monoclonal antibodies specific for individual keratin polypeptides. *Lab. Invest.* 55: 497-504.
4. Vojtesek, B., et al. 1990. A panel of monoclonal antibodies to keratin No. 7: characterization and value in tumor diagnosis. *Neoplasma* 37: 333-342.
5. Ramaekers, F., et al. 1990. Use of monoclonal antibodies to keratin 7 in the differential diagnosis of adenocarcinomas. *Am. J. Pathol.* 136: 641-655.
6. Markey, A.C., et al. 1991. Expression of simple epithelial keratins 8 and 18 in epidermal neoplasia. *J. Invest. Dermatol.* 97: 763-770.
7. Bartek, J., et al. 1991. A series of 14 new monoclonal antibodies to keratins: characterization and value in diagnostic histopathology. *J. Pathol.* 164: 215-224.

CHROMOSOMAL LOCATION

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

SOURCE

Cytokeratin 7 (H-50) is a rabbit polyclonal antibody raised against amino acids 6-55 mapping near the N-terminus of Cytokeratin 7 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Cytokeratin 7 (H-50) 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 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

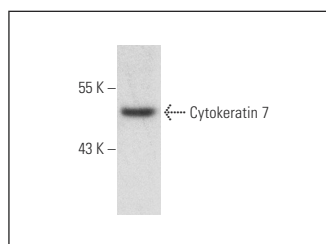
Molecular Weight of Cytokeratin 7: 54 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HeLa whole cell lysate: sc-2200 or human liver extract: sc-363766.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Cytokeratin 7 (H-50): sc-25721. Western blot analysis of Cytokeratin 7 expression in human liver tissue extract.

SELECT PRODUCT CITATIONS

1. Engelhardt, E.M., et al. 2010. Compressed collagen gel: a novel scaffold for human bladder cells. *J. Tissue Eng. Regen. Med.* 4: 123-130.
2. Du, J.X., et al. 2012. Ingredients of Huangqi decoction slow biliary fibrosis progression by inhibiting the activation of the transforming growth factor- β signaling pathway. *BMC Complement. Altern. Med.* 12: 33.

RESEARCH USE

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