

# Cytokeratin 7 (N-20): sc-17116

## 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) is a protein that 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.

## SOURCE

Cytokeratin 7 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Cytokeratin 7 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-17116 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Cytokeratin 7 (N-20) is recommended for detection of Cytokeratin 7 of 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), immunohistochemistry (including paraffin-embedded sections) (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 shRNA Plasmid (h): sc-35154-SH and Cytokeratin 7 shRNA (h) Lentiviral Particles: sc-35154-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.

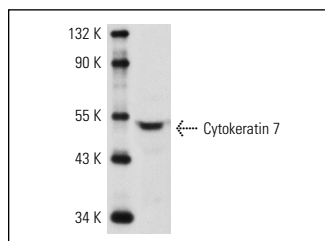
## STORAGE

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

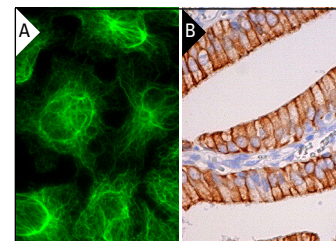
## RESEARCH USE

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

## DATA



Cytokeratin 7 (N-20): sc-17116. Western blot analysis of Cytokeratin 7 expression in HeLa whole cell lysate.



Cytokeratin 7 (N-20): sc-17116. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoskeletal localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoskeletal staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

- Gannot, G. and Tangrea, M.A. 2005. Layered peptide arrays high-throughput antibody screening of clinical samples. *J. Mol. Diagn.* 7: 427-436.
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- Peiffer, I., et al. 2007. Simultaneous differentiation of endothelial and trophoblastic cells derived from human embryonic stem cells. *Stem Cells Dev.* 16: 393-402.
- Gannot, G., et al. 2007. Layered peptide array for multiplex immunohistochemistry. *J. Mol. Diagn.* 9: 297-304.
- Khoury, T., et al. 2009. Eukaryotic initiation factor-4E and cyclin D1 expression associated with patient survival in lung cancer. *Clin. Lung Cancer* 10: 58-66.
- Cho, J.Y., et al. 2010. Expansion of hepatic progenitor cell in fatty liver graft after living donor liver transplantation. *Transpl. Int.* 23: 530-537.
- García-Becerra, R., et al. 2010. Calcitriol inhibits Ether-à go-go potassium channel expression and cell proliferation in human breast cancer cells. *Exp. Cell Res.* 316: 433-442.

## PROTOCOLS

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