SANTA CRUZ BIOTECHNOLOGY, INC.

Cytokeratin 7/17 (C46): sc-8421

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cytokeratin 7/17 (also designated KRT7 antibody, Keratin 7 antibody, KRT17 antibody, Keratin 17 antibody) comprise a diverse group of intermediate filament proteins (IFPs) that are expressed as pairs in both keratinized and non-keratinized epithelial tissue. Cytokeratins play a critical role in differentiation and tissue specialization and function to maintain the overall structural integrity of epithelial cells. Cytokeratins have been found to be useful markers of tissue differentiation which is directly applicable to the characterization of malignant tumors. Cytokeratins 10 and 13 are expressed highly in a subset of squamous cell carcinomas while cytokeratin 18 is expressed in a majority of adenocarcinomas and basal cell carcinomas. Cytokeratin 7 is expressed in pancreatic duct cells and islets of Langerhans and is a marker for pancreatic duct cell differentiation. Cytokeratin 17 is normally expressed in complex epithelia basal cells and can be used as a marker for basal cell differentiation.

CHROMOSOMAL LOCATION

Genetic locus: KRT7 (human) mapping to 12q13.13, KRT17 (human) mapping to 17q21.2; Krt7 (mouse) mapping to 15 F2, Krt17 (mouse) mapping to 11 D.

SOURCE

Cytokeratin 7/17 (C46) is a mouse monoclonal antibody raised against a cytoskeleton preparation from HeLa cells of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain 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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

Cytokeratin 7/17 (C46) is recommended for detection of Cytokeratin 7 and Cytokeratin 17 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

Molecular Weight of Cytokeratin 7: 54 kDa.

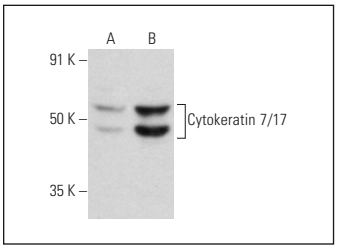
Molecular Weight of Cytokeratin 17: 46 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, T24 cell lysate: sc-2292 or NIH/3T3 whole cell lysate: sc-2210.

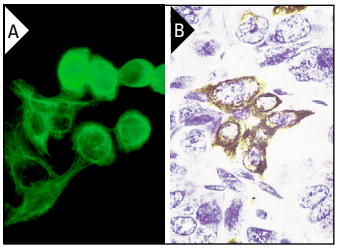
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Cytokeratin 7/17 (C46): sc-8421. Western blot analysis of Cytokeratin 7/17 expression in HeLa (**A**) and T24 (**B**) whole cell lysates.



Cytokeratin 7/17 (C46): sc-8421. Immunofluorescence staining of methanol-fixed HeLa cells (**A**) and immunoperoxidase staining of formalin-fixed, paraffin-embedded human liver tumor showing cytoskeletal localization (**B**).

SELECT PRODUCT CITATIONS

1. Alvarado, J., et al. 2005. Interferon-γ bound to extracellular matrix changes the hyporesponsiveness to LPS in crypt but not villous intestinal epithelial cells. Immunol. Lett. 99: 109-112.
2. Jin, J., et al. 2006. The zinc finger protein Gfi1 acts upstream of TNF to attenuate endotoxin-mediated inflammatory responses in the lung. Eur. J. Immunol. 36: 421-430.
3. Al-Nasiry, S., et al. 2009. Interstitial trophoblastic cell fusion and E-cadherin immunostaining in the placental bed of normal and hypertensive pregnancies. Placenta 30: 719-725.
4. Terakawa, J., et al. 2016. FGFR2IIIb-MAPK activity is required for epithelial cell fate decision in the lower Müllerian duct. Mol. Endocrinol. 30: 783-795.
5. Perdu, S., et al. 2016. Maternal obesity drives functional alterations in uterine NK cells. JCI Insight 1: e85560.
6. Hanasoge Somasundara, A.V., et al. 2021. Parity-induced changes to mammary epithelial cells control NKT cell expansion and mammary oncogenesis. Cell Rep. 37: 110099.

RESEARCH USE

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