

# Acidic Cytokeratin (3G128): sc-70310

## BACKGROUND

Cytokeratins comprise a diverse group of intermediate filament proteins (IFPs) that are expressed as pairs in both keratinized and non-keratinized epithelial tissue. Cytokeratins constitute up to 85% of mature keratinocytes in the vertebrate epidermis. Cytokeratins play a critical role in differentiation and tissue specialization, and they 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. Acidic Cytokeratin includes the low molecular weight members comprising the Acidic (pI<5.7) Cytokeratin subfamily.

## REFERENCES

- Moll, R., Franke, W.W., Schiller, D.L., Geiger, B. and Krepler, R. 1982. The catalog of human cytokeratins: patterns of expression in normal epithelia, tumors and cultured cells. *Cell* 31: 11-24.
- Jorcano, J.L., Rieger, M., Franz, J.K., Schiller, D.L., Moll, R., Franke, W.W. 1984. Identification of two types of keratin polypeptides within the Acidic Cytokeratin subfamily. *I. J. Mol. Biol.* 179: 257-281.
- Lane, E.B., Bartek, J., Purkis, P.E. and Leigh, I.M. 1985. Keratin antigens in differentiating skin. *Ann. N.Y. Acad. Sci.* 455241-455258.
- Osborn, M., van Lessen, G., Weber, K., Kloppel, G. and Altmannsberger, M. 1986. Differential diagnosis of gastrointestinal carcinomas by using monoclonal antibodies specific for individual keratin polypeptides. *Lab. Invest.* 55: 497-504.
- Van Eyken, P., Sciort, R. and Desmet, V.J. 1991. Immunocytochemistry of cytokeratins in primary human liver tumors. *APMIS Suppl.* 23: 77-85.
- Van der Velden, L.A., Schaafsma, H.E., Manni, J.J., Ramaekers, F.C. and Kuijpers, W. 1993. Cytokeratin expression in normal and (pre)malignant head and neck epithelia: an overview. *Head Neck* 15: 133-146.
- Arai, K., Kaneko, S., Naoi, M., Suzuki, K., Maruo, K. and Uehara, K. 1994. Expression of stratified squamous epithelia-type cytokeratin by canine mammary epithelial cells during tumorigenesis: type I (acidic) 57 kDa cytokeratin could be a molecular marker for malignant transformation of mammary epithelial cells. *J. Vet. Med. Sci.* 56: 51-58.
- Marceau, N. and Loranger, A. 1995. Cytokeratin expression, fibrillar organization and subtle function in liver cells. *Biochem. Cell Biol.* 73: 619-625.
- Fuchs, E. 1995. Keratins and the skin. *Annu. Rev. Cell Dev. Biol.* 11: 123-153.

## SOURCE

Acidic Cytokeratin (3G128) is a mouse monoclonal antibody raised against epidermal keratins of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Acidic Cytokeratin (3G128) is recommended for detection of most acidic (type I) cytokeratins of mouse, rat, human, bovine and rabbit 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

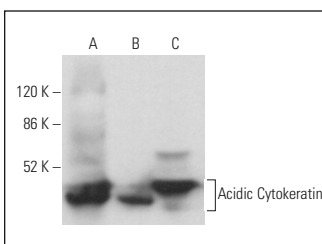
Molecular Weight of Acidic Cytokeratin: 40-65 kDa.

Positive Controls: DU 145 cell lysate: sc-2268, RT-4 whole cell lysate: sc-364257 or HEK293 whole cell lysate: sc-45136.

## 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



Acidic Cytokeratin (3G128): sc-70310. Western blot analysis of Acidic Cytokeratin expression in DU 145 (A), RT-4 (B) and HEK293 (C) whole cell lysates.

## 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.

## PROTOCOLS

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