



Cytokeratin 1/10 (2Q1048): sc-70906

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 play a critical role in differentiation and tissue specialization and maintain the overall structural integrity of epithelial cells. Cytokeratins are useful markers of tissue differentiation which is directly applicable to the characterization of malignant tumors. Cytokeratin polypeptides are designated 1 to 20 and Cytokeratin 1 has the highest molecular weight, while Cytokeratin 19 has the lowest molecular weight. The Cytokeratins are divided into the type I and type II subgroups. The type II family members comprise the basic to neutral Cytokeratins 1-8, while the type I group comprises the acidic Cytokeratins 9-20.

REFERENCES

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3. van der Velden, L.A., et al. 1993. Cytokeratin expression in normal and (pre) malignant head and neck epithelia: an overview. *Head Neck* 15: 133-146.
4. Silen, A., et al. 1994. Evaluation of a new tumor marker for Cytokeratin 8 and 18 fragments in healthy individuals and prostate cancer patients. *Prostate* 24: 326-332.
5. Silen, A., et al. 1995. A novel IRMA and ELISA for quantifying Cytokeratin 8 and 18 fragments in the sera of healthy individuals and cancer patients. *Scan. J. Clin. Lab. Invest.* 55: 153-161.
6. Marceau, N. and Loranger, A. 1995. Cytokeratin expression, fibrillar organization and subtle function in liver cells. *Biochem. Cell Biol.* 73: 619-625.
7. Quillien, V., et al. 1995. Serum and tissue distribution of a fragment of Cytokeratin 19 (cyfra 21-1) in lung cancer patients. *Anticancer Res.* 15: 2857-2863.
8. Mukhopadhyay, T. and Roth, J.A. 1996. Functional inactivation of p53 by antisense RNA induces invasive ability of lung carcinoma cells and down-regulates cytokeratin synthesis. *Anticancer Res.* 16: 1683-1689.
9. Porter, R.M., et al. 2000. K15 expression implies lateral differentiation within stratified epithelial basal cells. *Lab. Invest.* 80: 1701-1710.

CHROMOSOMAL LOCATION

Genetic locus: KRT1 (human) mapping to 12q13.13, KRT10 (human) mapping to 17q21.2; Krt1 (mouse) mapping to 15 F3, Krt10 (mouse) mapping to 11 D.

SOURCE

Cytokeratin 1/10 (2Q1048) is a mouse monoclonal antibody raised against full length proteins Cytokeratin 1 and 10 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Cytokeratin 1/10 (2Q1048) is recommended for detection of Cytokeratin 1 and Cytokeratin 10 of mouse, rat, human and porcine 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Cytokeratin 1: 67 kDa.

Molecular Weight of Cytokeratin 10: 57 kDa.

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.

SELECT PRODUCT CITATIONS

1. Zhong, T., et al. 2018. Lectin histochemical analysis of uterine natural killer cells in normal, hydatidiform molar and invasive molar pregnancy. *Oncol. Lett.* 16: 6458-6464.

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.



See **Cytokeratin 1 (E-12): sc-376224** for Cytokeratin 1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.