

Cytokeratin 23 (14L-3): sc-100927

BACKGROUND

Cytokeratins comprise a diverse group of intermediate filament proteins that are expressed in both keratinized and non-keratinized epithelial tissue. The cytokeratin proteins play a critical role in differentiation, as well as tissue specialization and function, and maintenance of the overall structural integrity of epithelial cells. There are two types of cytokeratins, namely the type I cytokeratins and the type II cytokeratins. Cytokeratin 23, also known as KRT23, K23, CK23 or HAIK1, is a 422 amino acid intermediate filament protein that functions as a heterotetramer that is composed of two type I and two type II cytokeratins. Characteristic of most Cytokeratins, Cytokeratin 23 is thought to participate in maintaining the structural integrity of a variety of cells. Cytokeratin 23 expression is induced in pancreatic cancer cells, suggesting a possible role in carcinogenesis.

REFERENCES

1. Zhang, J.S., Wang, L., Huang, H., Nelson, M. and Smith, D.I. 2001. Keratin 23 (K23), a novel acidic keratin, is highly induced by histone deacetylase inhibitors during differentiation of pancreatic cancer cells. *Genes Chromosomes Cancer* 30: 123-135.
2. Hesse, M., Magin, T.M. and Weber, K. 2001. Genes for intermediate filament proteins and the draft sequence of the human genome: novel keratin genes and a surprisingly high number of pseudogenes related to keratin genes 8 and 18. *J. Cell Sci.* 114: 2569-2575.

CHROMOSOMAL LOCATION

Genetic locus: KRT23 (human) mapping to 17q21.2.

SOURCE

Cytokeratin 23 (14L-3) is a mouse monoclonal antibody raised against recombinant Cytokeratin 23 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Cytokeratin 23 (14L-3) is recommended for detection of Cytokeratin 23 of 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).

Suitable for use as control antibody for Cytokeratin 23 siRNA (h): sc-94056, Cytokeratin 23 shRNA Plasmid (h): sc-94056-SH and Cytokeratin 23 shRNA (h) Lentiviral Particles: sc-94056-V.

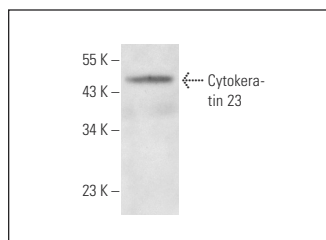
Molecular Weight of Cytokeratin 23: 48 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, HeLa whole cell lysate: sc-2200 or A549 cell lysate: sc-2413.

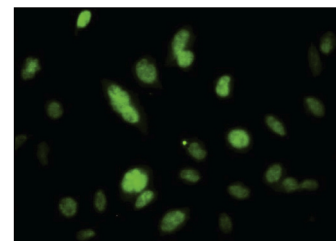
RECOMMENDED SUPPORT REAGENTS

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.

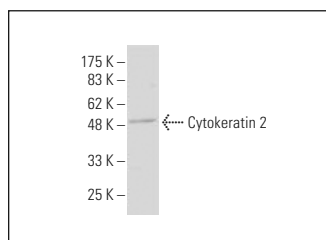
DATA



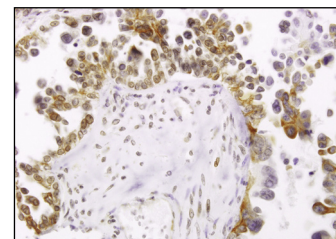
Cytokeratin 23 (14L-3): sc-100927. Western blot analysis of Cytokeratin 23 expression in HeLa whole cell lysate.



Cytokeratin 23 (14L-3): sc-100927. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear localization.



Cytokeratin 23 (14L-3): sc-100927. Western blot analysis of Cytokeratin 23 expression in HeLa nuclear extract.



Cytokeratin 23 (14L-3): sc-100927. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human ovarian cancer tissue showing nuclear and cytoplasmic localization.

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 for detailed protocols and support products.