

Cytokeratin 23 (N-14): sc-164139

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

- Zhang, J.S., et al. 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.
- Hesse, M., et al. 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.
- Tolstonog, G.V., et al. 2002. Cytoplasmic intermediate filaments are stably associated with nuclear matrices and potentially modulate their DNA-binding function. *DNA Cell Biol.* 21: 213-239.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606194. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Suzuki, A., et al. 2004. Single nucleotide polymorphisms associated with aggressive periodontitis and severe chronic periodontitis in Japanese. *Biochem. Biophys. Res. Commun.* 317: 887-892.
- Schweizer, J., et al. 2006. New consensus nomenclature for mammalian keratins. *J. Cell Biol.* 174: 169-174.

CHROMOSOMAL LOCATION

Genetic locus: KRT23 (human) mapping to 17q21.2; Krt23 (mouse) mapping to 11 D.

SOURCE

Cytokeratin 23 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Cytokeratin 23 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-164139 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Cytokeratin 23 (N-14) is recommended for detection of Cytokeratin 23 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other Cytokeratin family members.

Suitable for use as control antibody for Cytokeratin 23 siRNA (h): sc-94056, Cytokeratin 23 siRNA (m): sc-142763, Cytokeratin 23 shRNA Plasmid (h): sc-94056-SH, Cytokeratin 23 shRNA Plasmid (m): sc-142763-SH, Cytokeratin 23 shRNA (h) Lentiviral Particles: sc-94056-V and Cytokeratin 23 shRNA (m) Lentiviral Particles: sc-142763-V.

Molecular Weight of Cytokeratin 23: 48 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, A549 cell lysate: sc-2413 or A-431 whole cell lysate: sc-2201.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.