SANTA CRUZ BIOTECHNOLOGY, INC.

Cytokeratin 23 (C-1): sc-365892

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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., 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.
2. 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.
3. 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.

CHROMOSOMAL LOCATION

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

SOURCE

Cytokeratin 23 (C-1) is a mouse monoclonal antibody raised against amino acids 161-290 mapping within an internal region of Cytokeratin 23 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.

Cytokeratin 23 (C-1) is available conjugated to agarose (sc-365892 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365892 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365892 PE), fluorescein (sc-365892 FITC), Alexa Fluor® 488 (sc-365892 AF488), Alexa Fluor® 546 (sc-365892 AF546), Alexa Fluor® 594 (sc-365892 AF594) or Alexa Fluor® 647 (sc-365892 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365892 AF680) or Alexa Fluor® 790 (sc-365892 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

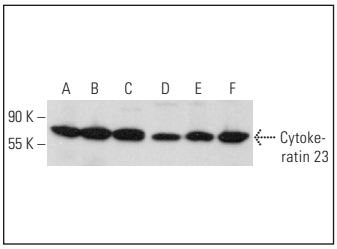
Cytokeratin 23 (C-1) is recommended for detection of Cytokeratin 23 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

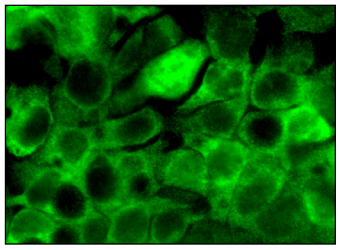
Molecular Weight of Cytokeratin 23: 48 kDa.

Positive Controls: c4 whole cell lysate: sc-364186, F9 cell lysate: sc-2245 or NIH/3T3 whole cell lysate: sc-2210.

DATA



Cytokeratin 23 (C-1): sc-365892. Western blot analysis of Cytokeratin 23 expression in c4 (**A**), P19 (**B**), F9 (**C**), Sol8 (**D**), NIH/3T3 (**E**) and BC_3H1 (**F**) whole cell lysates.



Cytokeratin 23 (C-1): sc-365892. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic and membrane localization.

SELECT PRODUCT CITATIONS

1. Teijeiro, J.M. and Marini, P.E. 2020. Hormone-regulated PKA activity in porcine oviductal epithelial cells. Cell Tissue Res. 380: 657-667.
2. Hu, W.Y., et al. 2021. Keratin profiling by single-cell RNA-sequencing identifies human prostate stem cell lineage hierarchy and cancer stem-like cells. Int. J. Mol. Sci. 22: 8109.
3. Marini, P.E. and Teijeiro, J.M. 2022. Histological changes and transglutaminase 2 expression in the oviduct of advanced pregnant cows. Reprod. Biol. 22: 100616.

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.