SANTA CRUZ BIOTECHNOLOGY, INC.

Cytokeratin 16 (F-2): sc-271937

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cytokeratins comprise a diverse group of intermediate filament proteins that are expressed as pairs in both keratinized and non-keratinized epithelial tissue. The Cytokeratin proteins play a critical role in differentiation, as well as tissue specialization and function, to maintain the overall structural integrity of epithelial cells. Cytokeratins are also useful markers in identifying the origin of metastatic tumors. Cytokeratin 16 is expressed in benign stratified squamous epithelium and squamous cell carcinoma of the head and neck, as well as luminal cells of mammary gland and sweat ducts. It is absent in noninvasive breast carcinomas and normal breast tissue. Mutations in the Cytokeratin 16 gene cause various diseases, including pachyonychia congenita type 1 (PC1), nonepidermolytic palmoplantar keratoderma (NEPPK) and unilateral palmoplantar verrucous nevus (UPVN).

REFERENCES

1. Wetzels, R.H., Kuijpers, H.J., Lane, E.B., Leigh, I.M., Troyanovsky, S.M., Holland, R., van Haelst, U.J. and Ramaekers, F.C. 1991. Basal cell-specific and hyperproliferation-related keratins in human breast cancer. Am. J. Pathol. 138: 751-763.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 600962. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Leon, J.E., Mata, G.M., Fregnani, E.R., Carlos-Bregni, R., de Almeida, O.P., Mosqueda-Taylor, A. and Vargas, P.A. 2005. Clinicopathological and immunohistochemical study of 39 cases of adenomatoid odontogenic tumor: a multicentric study. Oral Oncol. 41: 835-842.
4. Sesterhenn, A.M., Mandic, R., Dunne, A.A. and Werner, J.A. 2005. Cytokeratins 6 and 16 are frequently expressed in head and neck squamous cell carcinoma cell lines and fresh biopsies. Anticancer Res. 25: 2675-2680.
5. Shen, J., Chen, X.M., Wang, S.Z., Wang, L. and Xiong, S.C. 2005. Clinicopathological and immunohistochemical study of oral teratoid cyst. Zhonghua Kou Qiang Yi Xue Za Zhi 40: 62-66.

CHROMOSOMAL LOCATION

Genetic locus: KRT16 (human) mapping to 17q21.2.

SOURCE

Cytokeratin 16 (F-2) is a mouse monoclonal antibody raised against amino acids 428-473 mapping at the C-terminus of Cytokeratin 16 of human origin.

PRODUCT

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

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Cytokeratin 16 (F-2) is recommended for detection of Cytokeratin 16 of 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 16 siRNA (h): sc-60498, Cytokeratin 16 shRNA Plasmid (h): sc-60498-SH and Cytokeratin 16 shRNA (h) Lentiviral Particles: sc-60498-V.

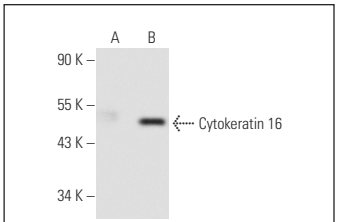
Molecular Weight of Cytokeratin 16: 48 kDa.

Positive Controls: Cytokeratin 16 (h): 293T Lysate: sc-113846 or HeLa whole cell lysate: sc-2200.

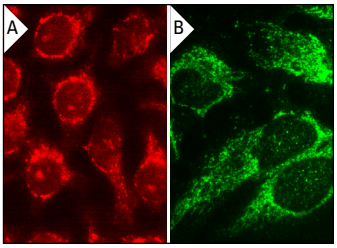
RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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.

DATA



Cytokeratin 16 (F-2): sc-271937. Western blot analysis of Cytokeratin 16 expression in non-transfected: sc-117752 (**A**) and human Cytokeratin 16 transfected: sc-113846 (**B**) 293T whole cell lysates.



Cytokeratin 16 (F-2): sc-271937. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A,B**).

SELECT PRODUCT CITATIONS

1. Kara, A., Duman, B.O., Yazır, Y., SinanYilmaz, M., Halbutogulları, Z.S.U., Demir, D., Kara, R.O., Bayraktar, H. and Guven, M. 2019. Evaluation of the effect of diclofenac sodium and 5-fluourasil in a 3D cholesteatoma cell culture model. Otol. Neurotol. 40: 1018-1025.

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.