SANTA CRUZ BIOTECHNOLOGY, INC.

Cytokeratin 16 (E-10): sc-377224

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., et al. 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., et al. 2005. Clinicopathological and immunohistochemical study of 39 cases of adenomatoid odontogenic tumor: a multicentric study. Oral Oncol. 41: 835-842.
4. Sesterhenn, A.M., et al. 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.

CHROMOSOMAL LOCATION

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

SOURCE

Cytokeratin 16 (E-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 443-464 at the C-terminus of Cytokeratin 16 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Cytokeratin 16 (E-10) is available conjugated to agarose (sc-377224 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377224 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377224 PE), fluorescein (sc-377224 FITC), Alexa Fluor® 488 (sc-377224 AF488), Alexa Fluor® 546 (sc-377224 AF546), Alexa Fluor® 594 (sc-377224 AF594) or Alexa Fluor® 647 (sc-377224 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377224 AF680) or Alexa Fluor® 790 (sc-377224 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-377224 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

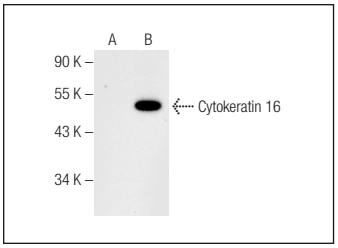
Cytokeratin 16 (E-10) is recommended for detection of Cytokeratin 16 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), 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 16 siRNA (h): sc-60498, Cytokeratin 16 shRNA Plasmid (h): sc-60498-SH and Cytokeratin 16 shRNA (h) Lentiviral Particles: sc-60498-V.

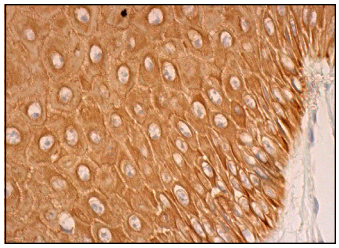
Molecular Weight of Cytokeratin 16: 48 kDa.

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

DATA



Cytokeratin 16 (E-10): sc-377224. 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 (E-10): sc-377224. Immunoperoxidase staining of formalin fixed, paraffin-embedded oral mucosa tissue showing cytoplasmic staining of squamous epithelial cells.

SELECT PRODUCT CITATIONS

1. Schürmann, M., et al. 2021. Chronic inflammation of middle ear cholesteatoma promotes its recurrence via a paracrine mechanism. Cell Commun. Signal. 19: 25.

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.