SANTA CRUZ BIOTECHNOLOGY, INC.

Cytokeratin 13 (1C7): sc-58721

BACKGROUND

Cytokeratins comprise a diverse group of intermediate filament proteins (IFPs) that are expressed as pairs in both keratinized and non-keratinized epithelial tissue. Cytokeratins play a critical role in differentiation and tissue specialization and function to maintain the overall structural integrity of epithelial cells. Cytokeratins have been found to be useful markers of tissue differentiation, which is directly applicable to the characterization of malignant tumors. Cytokeratins 10 and 13 are present in the cytoskeletal region of a subset of squamous cell carcinomas. Cytokeratin 13 belongs to the intermediate filament family and is a heterotetramer of two type I acidic and two type II basic keratins. It is generally associated with Cytokeratin 4. Defects in the KRT13 gene are a cause of white sponge nevus of cannon (WSN), a rare autosomal dominant disorder which predominantly affects noncornified stratified squamous epithelia, and is characterized by the presence of soft, white and spongy plaques in the oral mucosa.

REFERENCES

1. Richard, G., De Laurenzi, V., Didona, B., Bale, S.J. and Compton, J.G. 1995. Keratin 13 point mutation underlies the hereditary mucosal epithelial disorder white sponge nevus. Nat. Genet. 11: 453-455.
2. Rugg, E., Magee, G., Wilson, N., Brandrup, F., Hamburger, J. and Lane, E. 1999. Identification of two novel mutations in keratin 13 as the cause of white sponge naevus. Oral Dis. 5: 321-324.
3. Terrinoni, A., Rugg, E.L., Lane, E.B., Melino, G., Felix, D.H., Munro, C.S. and McLean, W.H. 2001. A novel mutation in the keratin 13 gene causing oral white sponge nevus. J. Dent. Res. 80: 919-923.
4. Chao, S.C., Tsai, Y.M., Yang, M.H. and Lee, J.Y. 2003. A novel mutation in the keratin 4 gene causing white sponge naevus. Br. J. Dermatol. 148: 1125-1128.

CHROMOSOMAL LOCATION

Genetic locus: KRT13 (human) mapping to 17q12-q21.2; Krt13 (mouse) mapping to 11 D.

SOURCE

Cytokeratin 13 (1C7) is a mouse monoclonal antibody raised against cytokeratin preparation extracted from esophagus of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

Cytokeratin 13 (1C7) is recommended for detection of Cytokeratin 13 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

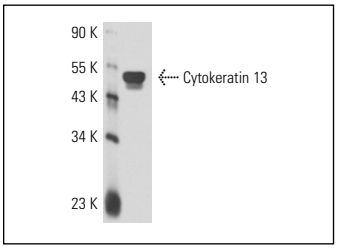
Suitable for use as control antibody for Cytokeratin 13 siRNA (h): sc-43308, Cytokeratin 13 shRNA Plasmid (h): sc-43308-SH and Cytokeratin 13 shRNA (h) Lentiviral Particles: sc-43308-V.

Molecular Weight of Cytokeratin 13: 52 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Cytokeratin 13 (1C7): sc-58721. Western blot analysis of Cytokeratin 13 expression in A-431 whole cell lysate.

RESEARCH USE

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