

# Cytokeratin 13 (B-2): sc-376047

## 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

- Richard, G., et al. 1995. Keratin 13 point mutation underlies the hereditary mucosal epithelial disorder white sponge nevus. *Nat. Genet.* 11: 453-455.
- Rugg, E., et al. 1999. Identification of two novel mutations in keratin 13 as the cause of white sponge naevus. *Oral Dis.* 5: 321-324.
- Terrinoni, A., et al. 2001. A novel mutation in the keratin 13 gene causing oral white sponge nevus. *J. Dent. Res.* 80: 919-923.
- Chao, S.C., et al. 2003. A novel mutation in the keratin 4 gene causing white sponge naevus. *Br. J. Dermatol.* 148: 1125-1128.
- SWISS-PROT/TrEMBL (P13646). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

## CHROMOSOMAL LOCATION

Genetic locus: KRT13 (human) mapping to 17q21.2.

## SOURCE

Cytokeratin 13 (B-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 405-439 near the C-terminus of Cytokeratin 13 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-376047 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## 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.

## APPLICATIONS

Cytokeratin 13 (B-2) is recommended for detection of Cytokeratin 13 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 13 siRNA (h): sc-43308, Cytokeratin 13 shRNA Plasmid (h): sc-43308-SH and Cytokeratin 13 shRNA (h) Lentiviral Particles: sc-43308-V.

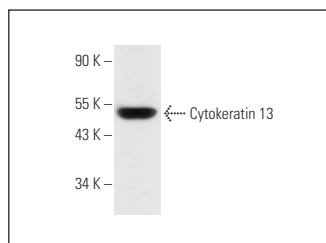
Molecular Weight of Cytokeratin 13: 52 kDa.

Positive Controls: A-431 whole cell lysate: sc-220 or human esophagus extract: sc-363760.

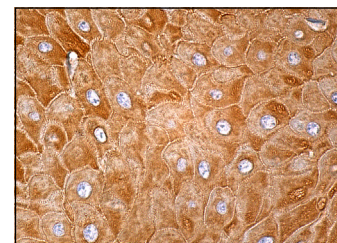
## RECOMMENDED SUPPORT REAGENTS

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 A/G PLUS-Agarose: sc-2003 (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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



Cytokeratin 13 (B-2): sc-376047. Western blot analysis of Cytokeratin 13 expression in human esophagus tissue extract.



Cytokeratin 13 (B-2): sc-376047. Immunoperoxidase staining of formalin fixed, paraffin-embedded human oral mucosa tissue showing cytoplasmic staining of squamous epithelial cells.

## SELECT PRODUCT CITATIONS

- Yin, L., et al. 2022. KRT13 promotes stemness and drives metastasis in breast cancer through a plakoglobin/c-Myc signaling pathway. *Breast Cancer Res.* 24: 7.



See **pan-Cytokeratin (C11): sc-8018** for pan-Cytokeratin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.