SANTA CRUZ BIOTECHNOLOGY, INC.

Cytokeratin 15 (LHK15): sc-47697

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cytokeratin 15 (CK15, K15, K1CO, keratin15, type I cytoskeletal 15) is an intermediate filament (IF) type I protein that is responsible for the mechanical integrity of epithelial cells. Keratin family members are subdivided into cytokeratins and hair keratins. Most of the type I cytokeratins consist of acidic proteins which are arranged in pairs of heterotypic keratin chains, and are clustered in a region on chromosome 17q21.2. Cytokeratin 15 is a specific marker of stem cells of the hair-follicle bulge and may be a useful marker for diagnosis between basal cell carcinoma (BCC) and trichoepithelioma. Trichoblastoma are benign neoplasms of follicular differentiation frequently found in nevus sebaceus. Many morphologic features are shared with nodular basal cell carcinoma, sometimes rendering a diagnosis difficult. Trichoblastoma and BCC show variable expression of Cytokeratin 15 and Cytokeratin 19, and absence of hair keratins.

CHROMOSOMAL LOCATION

Genetic locus: KRT15 (human) mapping to 17q21.2; Krt15 (mouse) mapping to 11 D.

SOURCE

Cytokeratin 15 (LHK15) is a mouse monoclonal antibody raised against the last 17 amino acids of Cytokeratin 15 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Cytokeratin 15 (LHK15) is available conjugated to agarose (sc-47697 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-47697 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-47697 PE), fluorescein (sc-47697 FITC), Alexa Fluor® 488 (sc-47697 AF488), Alexa Fluor® 546 (sc-47697 AF546), Alexa Fluor® 594 (sc-47697 AF594) or Alexa Fluor® 647 (sc-47697 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-47697 AF680) or Alexa Fluor® 790 (sc-47697 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Cytokeratin 15 (LHK15) is recommended for detection of Cytokeratin 15 of mouse, rat and 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Cytokeratin 15 siRNA (h): sc-44524, Cytokeratin 15 siRNA (m): sc-44525, Cytokeratin 15 shRNA Plasmid (h): sc-44524-SH, Cytokeratin 15 shRNA Plasmid (m): sc-44525-SH, Cytokeratin 15 shRNA (h) Lentiviral Particles: sc-44524-V and Cytokeratin 15 shRNA (m) Lentiviral Particles: sc-44525-V.

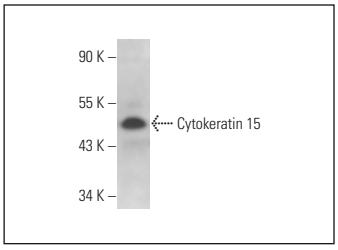
Molecular Weight of Cytokeratin 15: 52 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201.

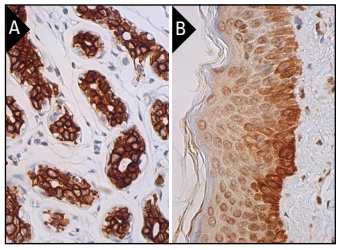
STORAGE

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

DATA



Cytokeratin 15 (LHK15): sc-47697. Western blot analysis of Cytokeratin 15 expression in A-431 whole cell lysate.



Cytokeratin 15 (LHK15): sc-47697. Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic and membrane staining of glandular cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic and nuclear staining of keratinocytes and melanocytes and nuclear staining of fibroblasts and Langerhans cells (**B**).

SELECT PRODUCT CITATIONS

1. Lyngholm, M., et al. 2008. Immunohistochemical markers for corneal stem cells in the early developing human eye. Exp. Eye Res. 87: 115-121.
2. Ahenkorah, J., et al. 2009. Immunofluorescence confocal laser scanning microscopy and immuno-electron microscopic identification of keratins in human materno-foetal interaction zone. J. Cell. Mol. Med. 13: 735-748.
3. Kunicher, N., et al. 2011. Characterization of factors that determine lentiviral vector tropism in skin tissue using an *ex vivo* model. J. Gene Med. 13: 209-220.
4. Sellheyer, K. and Nelson, P. 2012. The ventral proximal nail fold: stem cell niche of the nail and equivalent to the follicular bulge—a study on developing human skin. J. Cutan. Pathol. 39: 835-843.
5. Saghizadeh, M., et al. 2013. Enhanced wound healing, kinase and stem cell marker expression in diabetic organ-cultured human corneas upon MMP-10 and cathepsin F gene silencing. Invest. Ophthalmol. Vis. Sci. 54: 8172-8180.
6. Winkler, M.A., et al. 2014. Targeting miR-146a to treat delayed wound healing in human diabetic organ-cultured corneas. PLoS ONE 9: e114692.
7. Kramerov, A.A., et al. 2015. Persistence of reduced expression of putative stem cell markers and slow wound healing in cultured diabetic limbal epithelial cells. Mol. Vis. 21: 1357-1367.
8. Dziasko, M.A., et al. 2015. Limbal melanocytes support limbal epithelial stem cells in 2D and 3D microenvironments. Exp. Eye Res. 138: 70-79.
9. Levinsohn, J.L., et al. 2016. Somatic mutations in NEK9 cause nevus comedonicus. Am. J. Hum. Genet. 98: 1030-1037.

RESEARCH USE

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