

Cytokeratin 15 (0.N.360): sc-70912

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 cyto-keratins 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 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.

REFERENCES

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2. Waseem, A., et al. 1999. Keratin 15 expression in stratified epithelia: downregulation in activated keratinocytes. *J. Invest. Dermatol.* 112: 362-369.
3. Werner, S., et al. 2000. Suppression of keratin 15 expression by transforming growth factor β *in vitro* and by cutaneous injury *in vivo*. *Exp. Cell Res.* 254: 80-90.
4. Whittock, N.V., et al. 2000. Genomic organization and amplification of the human keratin 15 and keratin 19 genes. *Biochem. Biophys. Res. Commun.* 267: 462-465.
5. Badock, V., et al. 2001. Apoptosis-induced cleavage of keratin 15 and keratin 17 in a human breast epithelial cell line. *Cell Death Differ.* 8: 308-315.
6. Kurzen, H., et al. 2001. Cytokeratins as markers of follicular differentiation: an immunohistochemical study of trichoblastoma and basal cell carcinoma. *Am. J. Dermatopathol.* 23: 501-509.
7. Liu, Y., et al. 2003. Keratin 15 promoter targets putative epithelial stem cells in the hair follicle bulge. *J. Invest. Dermatol.* 121: 963-968.

CHROMOSOMAL LOCATION

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

SOURCE

Cytokeratin 15 (0.N.360) is a mouse monoclonal antibody raised against the last 17 amino acids of Cytokeratin 15 of human origin.

PRODUCT

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

APPLICATIONS

Cytokeratin 15 (0.N.360) 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 μ g per 100-500 μ g 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.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

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.



See **Cytokeratin 15 (LHK15): sc-47697** for Cytokeratin 15 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.