

# Cytokeratin 15 (SPM190): sc-56520

## 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 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

1. Kanitakis, J., et al. 1999. Expression of the hair stem cell-specific keratin 15 in pilar tumors of the skin. *Eur. J. Dermatol.* 9: 363-365.
2. Waseem, A., et al. 1999. Keratin 15 expression in stratified epithelia: downregulation in activated keratinocytes. *J. Invest. Dermatol.* 112: 362-369.

## CHROMOSOMAL LOCATION

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

## SOURCE

Cytokeratin 15 (SPM190) 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<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Cytokeratin 15 (SPM190) is recommended for detection of Cytokeratin 15 of mouse, rat, human and bovine 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.

## 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.

## SELECT PRODUCT CITATIONS


1. Ahmed, N., et al. 2010. Modulation of PP2A activity by Jacalin: is it through caveolae and ER chaperones? *Glycoconj. J.* 27: 723-734.
2. Tokarsky-Amiel, R., et al. 2013. Dynamics of senescent cell formation and retention revealed by p14<sup>ARF</sup> induction in the epidermis. *Cancer Res.* 73: 2829-2839.
3. Pontiggia, L., et al. 2013. Optimizing *in vitro* culture conditions leads to a significantly shorter production time of human dermo-epidermal skin substitutes. *Pediatr. Surg. Int.* 29: 249-256.
4. Mazzone, L., et al. 2014. Experimental tissue engineering of fetal skin. *Pediatr. Surg. Int.* 30: 1241-1247.
5. Böttcher-Haberzeth, S., et al. 2014. Tissue engineering of skin: human tonsil-derived mesenchymal cells can function as dermal fibroblasts. *Pediatr. Surg. Int.* 30: 213-222.
6. Yosef, R., et al. 2016. Directed elimination of senescent cells by inhibition of Bcl-w and Bcl-x<sub>L</sub>. *Nat. Commun.* 7: 11190.
7. Dong, J.Y., et al. 2017. Histomorphological observation of surgical debridement combined with negative pressure therapy in treatment of diabetic foot. *Chin. J. Traumatol.* 20: 202-206.
8. Lin, S., et al. 2019. The mitochondrial deoxyguanosine kinase is required for cancer cell stemness in lung adenocarcinoma. *EMBO Mol. Med.* 21: e10849.

## 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.



See **Cytokeratin 15 (LHK15): sc-47697** for Cytokeratin 15 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.