

Cytokeratin 15 (M-14): sc-69554

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: down-regulation 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 (mouse) mapping to 11 D.

SOURCE

Cytokeratin 15 (M-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Cytokeratin 15 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-69554 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Cytokeratin 15 (M-14) is recommended for detection of Cytokeratin 15 of mouse and rat 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), 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).

Cytokeratin 15 (M-14) is also recommended for detection of Cytokeratin 15 in additional species, including equine, canine, bovine and porcine.

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

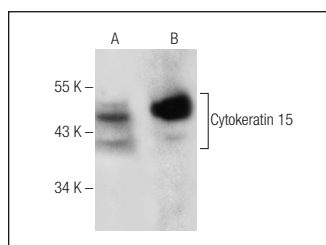
Molecular Weight of Cytokeratin 15: 52 kDa.

Positive Controls: 804G whole cell lysate or mouse skin tissue extract: sc-364251.

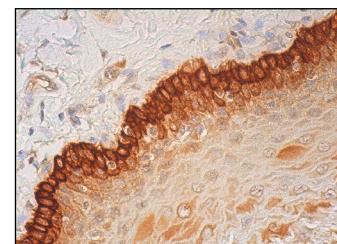
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Cytokeratin 15 (M-14): sc-69554. Western blot analysis of Cytokeratin 15 expression in 804G whole cell lysate (A) and mouse skin tissue extract (B).



Cytokeratin 15 (M-14): sc-69554. Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing membrane and cytoplasmic staining of squamous epithelial cells.

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.