

Cytokeratin 6 (A-12): sc-22479

BACKGROUND

Cytokeratins comprise a diverse group of intermediate filament proteins (IFPs) that are expressed as pairs in both keratinized and non-keratinized epithelial tissue, where they constitute up to 85% of mature keratinocytes in the vertebrate epidermis. Cytokeratins play a critical role in differentiation and tissue specialization and function to maintain the overall structural integrity of epithelial cells. The α -helical coiled-coil dimers associate laterally end-to-end to form 10 nm diameter filaments. Cytokeratins are useful markers of tissue differentiation, in addition, aid in the characterization of malignant tumors. IL-1 and TNF α induce transcription of Cytokeratin 6 in epidermal keratinocytes via the C/EBP β transcription factor. In humans, multiple isoforms of Cytokeratin 6 (6A-6F), encoded by several highly homologous genes, have distinct tissue expression patterns, and Cytokeratin 6A is the dominant form in epithelial tissue. Mutations in the gene encoding human Cytokeratin 6A are linked to several inheritable hair and skin pathologies.

REFERENCES

1. van der Velden, L.A., Schaafsma, H.E., Manni, J.J., Ramaekers, F.C. and Kuijpers, W. 1993. Cytokeratin expression in normal and (pre)malignant head and neck epithelia: an overview. *Head Neck* 15: 133-146.
2. Quillien, V., Ramee, M.P., Bansard, J.Y., Meritte, H., Briens, E., Logeais, Y., Langanay, T., Corbineau, H. and Dazord, L. 1995. Serum and tissue distribution of a fragment of cytokeratin 19 (CYFRA 21-1) in lung cancer patients. *Anticancer Res.* 15: 2857-2863.
3. Takahashi, K., Paladini, R.D. and Coulombe, P.A. 1995. Cloning and characterization of multiple human genes and cDNAs encoding highly related type II keratin 6 isoforms. *J. Biol. Chem.* 270: 18581-18592.
4. Mukhopadhyay, T. and Roth, J.A. 1996. Functional inactivation of p53 by antisense RNA induces invasive ability of lung carcinoma cells and down-regulates cytokeratin synthesis. *Anticancer Res.* 16: 1683-1689.
5. Horev, L., Glaser, B., Metzker, A., Ben-Amitai, D., Vardy, D. and Zlotogorski, A. 2000. Monilethrix: mutational hotspot in the helix termination motif of the human hair basic keratin 6. *Hum. Hered.* 50: 325-330.

CHROMOSOMAL LOCATION

Genetic locus: KRT6A/KRT6B/KRT6C (human) mapping to 12q13.13.

SOURCE

Cytokeratin 6 (A-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Cytokeratin 6 of human 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-22479 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Cytokeratin 6 (A-12) is recommended for detection of Cytokeratin 6A, 6B, 6C and 6F of 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

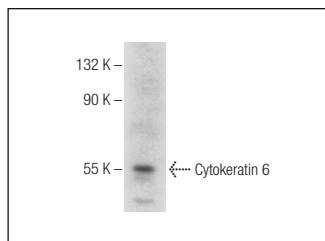
Molecular Weight of Cytokeratin 6: 56 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or human hair protein extract.

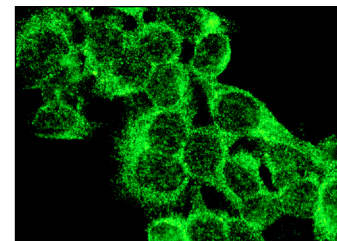
RECOMMENDED SECONDARY REAGENTS

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.

DATA



Cytokeratin 6 (A-12): sc-22479. Western blot analysis of Cytokeratin 6 expression in human hair protein extract.



Cytokeratin 6 (A-12): sc-22479. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoskeletal localization.

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.



Try **Cytokeratin 6/75 (H-6): sc-166074** or **Cytokeratin 6 (A-12): sc-514520**, our highly recommended monoclonal alternatives to Cytokeratin 6 (A-12).