

# Cytokeratin 6/75 (D-13): sc-22480

## 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  $\alpha$ -helical coiled-coil dimers associate laterally end-to-end to form 10 nm diameter filaments. Cytokeratins are useful markers of tissue differentiation and, in addition, aid in the characterization of malignant tumors. 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. The gene encoding human Cytokeratin 6A maps to chromosome 12q13.13, and mutations in this gene are linked to several inheritable hair and skin pathologies. Cytokeratin 75, also designated, K6HF in humans maps to the same genetic loci. In the companion layer of the hair follicle, Cytokeratin 75 is an element of keratin intermediate filaments.

## REFERENCES

- Rosenberg, M., Fuchs, E., Le Beau, M.M., Eddy, R.L. and Shows, T.B. 1991. Three epidermal and one simple epithelial type II keratin genes map to human chromosome 12. *Cytogenet. Cell. Genet.* 57: 33-38.
- 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.
- Fuchs, E. 1995. Keratins and the skin. *Annu. Rev. Cell. Dev. Biol.* 11: 123-153.
- 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.
- Winter, H., Langbein, L., Praetzel, S., Jacobs, M., Rogers, M.A., Leigh, I.M., Tidman, N. and Schweizer, J. 1998. A novel human type II cytokeratin, K6hf, specifically expressed in the companion layer of the hair follicle. *J. Invest. Dermatol.* 111: 955-962.

## CHROMOSOMAL LOCATION

Genetic locus: KRT75 (human) mapping to 12q13.13.

## SOURCE

Cytokeratin 6/75 (D-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Cytokeratin 6A of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-22480 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Cytokeratin 6/75 (D-13) is recommended for detection of Cytokeratins 6A, 6B, 6C and 75 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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); may cross-react with Cytokeratins 4 and 5, and Keratins 72 and 79.

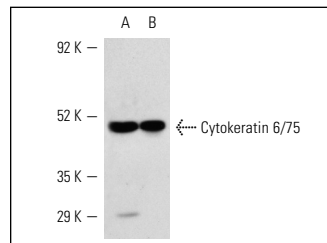
Cytokeratin 6/75 (D-13) is also recommended for detection of Cytokeratins 6A, 6B, 6C and 75 in additional species, including porcine.

Molecular Weight of Cytokeratin 6: 56 kDa.

Molecular Weight of Cytokeratin 75: 59 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or Caki-1 cell lysate: sc-2224.

## DATA



Cytokeratin 6/75 (D-13): sc-22480. Western blot analysis of Cytokeratin 6/75 expression in HeLa (A) and Caki-1 (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Moiseeva, E.P., et al. 2007. EGFR and Src are involved in indole-3-carbinol-induced death and cell cycle arrest of human breast cancer cells. *Carcinogenesis* 28: 435-445.

## 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.

**MONOS**  
Satisfaction  
Guaranteed

Try **Cytokeratin 6/75 (H-6): sc-166074** or **Cytokeratin 6 (A-12): sc-514520**, our highly recommended monoclonal alternatives to Cytokeratin 6/75 (D-13).