

# Keratin 25 (G-13): sc-136721

## BACKGROUND

The keratin multigene family is made of the "soft" epithelial cytokeratins and the "hard" hair keratins. While the epithelial cytokeratins are involved in the layering and formation of epithelia, the hair keratins are responsible for creating nails and hair. There are two types of hair keratins: the acidic type I hair keratin proteins and the basic/neutral type II hair keratin proteins. Keratin 25, also known as KRT25A or KRT25, is a 450 amino acid cytoplasmic protein belonging to the intermediate filament family. Essential for the proper assembly of type I and type II keratin protein complexes, Keratin 25 is strongly expressed in skin and scalp. Keratin 25 exists as a heterotetramer of two type I and two type II keratins and interacts with Cytokeratin 6. Keratin 25 is required for proper formation of keratin intermediate filaments in the inner root sheath (irs).

## REFERENCES

1. Rogers, M.A., Nischt, R., Korge, B., Krieg, T., Fink, T.M., Lichter, P., Winter, H. and Schweizer, J. 1995. Sequence data and chromosomal localization of human type I and type II hair keratin genes. *Exp. Cell Res.* 220: 357-362.
2. Winter, H., Rogers, M.A., Gebhardt, M., Wollina, U., Boxall, L., Chitayat, D., Babul-Hirji, R., Stevens, H.P., Zlotogorski, A. and Schweizer, J. 1997. A new mutation in the type II hair cortex keratin hHb1 involved in the inherited hair disorder monilethrix. *Hum. Genet.* 101: 165-169.
3. Bowden, P.E., Hainey, S.D., Parker, G., Jones, D.O., Zimonjic, D., Popescu, N. and Hodgins, M.B. 1998. Characterization and chromosomal localization of human hair-specific keratin genes and comparative expression during the hair growth cycle. *J. Invest. Dermatol.* 110: 158-164.
4. Winter, H., Labrèze, C., Chapalain, V., Surlève-Bazeille, J.E., Mercier, M., Rogers, M.A., Taieb, A. and Schweizer, J. 1998. A variable monilethrix phenotype associated with a novel mutation, Glu402Lys, in the helix termination motif of the type II hair keratin hHb1. *J. Invest. Dermatol.* 111: 169-172.

## CHROMOSOMAL LOCATION

Genetic locus: KRT25 (human) mapping to 17q21.2.

## SOURCE

Keratin 25 (G-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Keratin 25 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-136721 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

Keratin 25 (G-13) is recommended for detection of Keratin 25 of human 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other Keratin family members.

Suitable for use as control antibody for Keratin 25 siRNA (h): sc-93610, Keratin 25 shRNA Plasmid (h): sc-93610-SH and Keratin 25 shRNA (h) Lentiviral Particles: sc-93610-V.

Molecular Weight (predicted) of Keratin 25: 49 kDa.

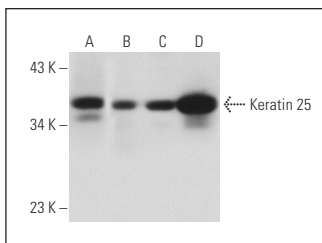
Molecular Weight (observed) of Keratin 25: 37 kDa.

Positive Controls: A-375 cell lysate: sc-3811, HeLa whole cell lysate: sc-2200 or CCD-1064Sk cell lysate: sc-2263.

## 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



Keratin 25 (G-13): sc-136721. Western blot analysis of Keratin 25 expression in A-375 (A), Hs 294T (B), HeLa (C) and CCD-1064Sk (D) whole cell lysates.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

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Try **Keratin 25 (B-2): sc-398320**, our highly recommended monoclonal alternative to Keratin 25 (G-13).