

Keratin 31 (C-13): sc-168253

BACKGROUND

The Keratin multigene family is made of "soft" epithelial cytokeratins and "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 Keratins: the acidic class I Keratin proteins and the basic/neutral class II Keratin proteins. As a type I hair Keratin protein, Keratin 31, also known as KRT31, HA1, HHA1 (hair Keratin, type I Ha1), K31 or KRTHA1, contains 416 amino acids and is expressed in scalp but not hairless skin. In growing hair, Keratin 31 localizes to keratinocytes of the hair cortex but is not present in medulla or inner root sheath. The gene encoding Keratin 31 maps to human chromosome 17q21.2.

REFERENCES

1. Heid, H.W., Werner, E. and Franke, W.W. 1986. The complement of native alpha-keratin polypeptides of hair-forming cells: a subset of eight polypeptides that differ from epithelial cytokeratins. *Differentiation* 32: 101-119.
2. Fink, P., Rogers, M.A., Korge, B., Winter, H. and Schweizer, J. 1995. A cDNA encoding the human type I hair keratin hHa1. *Biochim. Biophys. Acta* 1264: 12-14.
3. 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.
4. Rogers, M.A., Langbein, L., Praetzel, S., Moll, I., Krieg, T., Winter, H. and Schweizer, J. 1997. Sequences and differential expression of three novel human type-II hair keratins. *Differentiation* 61: 187-194.
5. Winter, H., Hofmann, I., Langbein, L., Rogers, M.A. and Schweizer, J. 1997. A splice site mutation in the gene of the human type I hair keratin hHa1 results in the expression of a tailless keratin isoform. *J. Biol. Chem.* 272: 32345-32352.
6. 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.
7. Langbein, L., Rogers, M.A., Winter, H., Praetzel, S., Beckhaus, U., Rackwitz, H.R. and Schweizer, J. 1999. The catalog of human hair keratins. I. Expression of the nine type I members in the hair follicle. *J. Biol. Chem.* 274: 19874-19884.
8. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 601077. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: KRT31 (human) mapping to 17q21.2.

SOURCE

Keratin 31 (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Keratin 31 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-168253 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

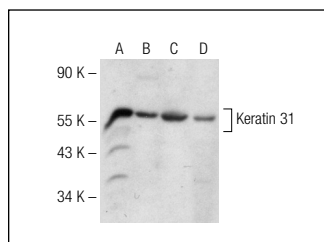
Keratin 31 (C-13) is recommended for detection of Keratin 31 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) 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 31 siRNA (h): sc-94137, Keratin 31 shRNA Plasmid (h): sc-94137-SH and Keratin 31 shRNA (h) Lentiviral Particles: sc-94137-V.

Molecular Weight of Keratin 31: 47 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or IMR-32 cell lysate: sc-2409.

DATA



Keratin 31 (C-13): sc-168253. Western blot analysis of Keratin 31 expression in HeLa (A), IMR-32 (B), TE671 (C) and K-562 (D) whole cell lysates.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.