

# Keratin 36 (S-12): sc-168269

## BACKGROUND

The Keratin multi-gene 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. Keratin 36, also known as HA6, KRTHA6 or hHa6, is a 467 amino acid protein that is a member of the type I acidic class of the Keratin family 36 and forms a heterodimer with type II Keratins. Expressed in the hair follicle, Keratin 36 becomes phosphorylated at amino acid residues 315 (Thr) and 328 (Ser). Two Keratin 36 isoforms exist due to an alternate splicing event, generating isoform 2 which is a shorter, 417 amino acid protein. The gene encoding Keratin 36 maps to human chromosome 17q21.2.

## REFERENCES

1. Yu, J., Yu, D.W., Checkla, D.M., Freedberg, I.M. and Bertolino, A.P. 1993. Human hair keratins. *J. Invest. Dermatol.* 101: 56S-59S.
2. Rogers, M.A., Schweizer, J., Kreig, T. and Winter, H. 1994. A novel human type I hair keratin gene: evidence for two keratin hHa3 isoforms. *Mol. Biol. Rep.* 20: 155-161.
3. Rogers, M.A., Winter, H., Wolf, C., Heck, M. and Schweizer, J. 1998. Characterization of a 190-kilobase pair domain of human type I hair keratin genes. *J. Biol. Chem.* 273: 26683-26691.
4. 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.
5. Langbein, L. and Schweizer, J. 2005. Keratins of the human hair follicle. *Int. Rev. Cytol.* 243: 1-78.
6. Olsen, J.V., Blagoev, B., Gnad, F., Macek, B., Kumar, C., Mortensen, P. and Mann, M. 2006. Global, *in vivo*, and site-specific phosphorylation dynamics in signaling networks. *Cell* 127: 635-648.

## CHROMOSOMAL LOCATION

Genetic locus: KRT36 (human) mapping to 17q21.2.

## SOURCE

Keratin 36 (S-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Keratin 36 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-168269 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 36 (S-12) is recommended for detection of Keratin 36 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 36 siRNA (h): sc-94098, Keratin 36 shRNA Plasmid (h): sc-94098-SH and Keratin 36 shRNA (h) Lentiviral Particles: sc-94098-V.

Molecular Weight of Keratin 36 isoforms: 52/47 kDa.

## 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) 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.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.