

# Keratin 78 (N-14): sc-168308

## 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 78 (KRT78), also known as K5B or Kb40, is a 520 amino acid protein that belongs to the intermediate filament family. Expressed in tongue, Keratin 78 forms a heterotetramer of two type I and two type II keratins and is encoded by a gene located on human chromosome 12q13.13 and mouse chromosome 15 F3.

## REFERENCES

1. Heid, H.W., et al. 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. Yu, J., et al. 1993. Human hair keratins. *J. Invest. Dermatol.* 101: 56S-59S.
3. Rogers, M.A., et al. 1998. Characterization of a 190-kilobase pair domain of human type I hair keratin genes. *J. Biol. Chem.* 273: 26683-26691.
4. Langbein, L., et al. 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. Rogers, M.A., et al. 2005. Characterization of new members of the human type II keratin gene family and a general evaluation of the keratin gene domain on chromosome 12q13.13. *J. Invest. Dermatol.* 124: 536-544.
6. Schweizer, J., et al. 2006. New consensus nomenclature for mammalian keratins. *J. Cell Biol.* 174: 169-174.
7. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611159. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: KRT78 (human) mapping to 12q13.13; Krt78 (mouse) mapping to 15 F3.

## SOURCE

Keratin 78 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Keratin 78 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-168308 P, (100  $\mu$ g 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 78 (N-14) is recommended for detection of Keratin 78 of mouse, rat and 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.

Keratin 78 (N-14) is also recommended for detection of Keratin 78 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for Keratin 78 siRNA (h): sc-95682, Keratin 78 siRNA (m): sc-146426, Keratin 78 shRNA Plasmid (h): sc-95682-SH, Keratin 78 shRNA Plasmid (m): sc-146426-SH, Keratin 78 shRNA (h) Lentiviral Particles: sc-95682-V and Keratin 78 shRNA (m) Lentiviral Particles: sc-146426-V.

Molecular Weight of Keratin 78: 57 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> 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.