Keratin 32 (M-13): sc-164729

SANTA CRUZ®
BIOTECHNOLOGY

The Power to Question

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. Keratin 32 (Krt32), also known as Keratin, type I cuticular Ha2, Hka2, Krt1-2 or Krtha2, is a 406 amino acid protein belonging the the intermediate filament family. As a type I hair Keratin, Keratin 32 is an acidic protein which heterodimerizes with type II keratins to form hair and nails. Keratin 32 is expressed in the cuticle of the hair shaft and is encoded by a gene located on human chromosome 17q21.2 and mouse chromosome 11 D.

REFERENCES

1. Heid, H.W., et al. 1988. Patterns of expression of trichocytic and epithelial cytokeratins in mammalian tissues. I. Human and bovine hair follicles. Differentiation 37: 137-157.

2. Yu, J., et al. 1993. Human hair keratins. J. Invest. Dermatol. 101: 56S-59S.

3. Rogers, M.A., et al. 1994. A novel human type I hair keratin gene: evidence for two keratin hHa3 isoforms. Mol. Biol. Rep. 20: 155-161.

4. Rogers, M.A., et al. 1996. Genomic characterization of the human type I cuticular hair keratin hHa2 and identification of an adjacent novel type I hair keratin gene hHa5. J. Invest. Dermatol. 107: 633-638.

5. 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.

6. Online Mendelian Inheritance in Man, OMIM™. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 602760. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/602760

7. 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.

8. Schweizer, J., et al. 2006. New consensus nomenclature for mammalian keratins. J. Cell Biol. 174: 169-174.

CHROMOSOMAL LOCATION

Genetic locus: Krt32 (mouse) mapping to 11 D.

200SOURCE

Keratin 32 (M-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Keratin 32 of mouse 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-164729 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Keratin 32 (M-13) is recommended for detection of Keratin 32 of mouse 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 32 siRNA (m): sc-146410, Keratin 32 shRNA Plasmid (m): sc-146410-SH and Keratin 32 shRNA (m) Lentiviral Particles: sc-146410-V.

Molecular Weight of Keratin 32: 46 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.

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.