

# KRTAP16-1 (C-20): sc-247507

## BACKGROUND

Hair is a structure that is unique to mammals. It plays an important role in the retention of heat, as well as sexual dimorphism, attraction of mates and protection of skin. The major components of hair are  $\alpha$ -keratins and keratin-associated proteins (KRTAPs or KAPs), each of which are encoded by multi-gene families. Hair keratins form an intermediate filament (IF) network, which is embedded in an interfilamentous matrix consisting of KRTAPs. KRTAPs comprise three major groups, which are essential for the formation of rigid and resistant hair shafts through disulfide bond cross-linking or hydrophobic interactions with keratins. These groups are designated high cysteine (HS), which includes subfamilies 1, 2, 3, 10, 12, 16, 29 and 31, ultrahigh cysteine, including subfamilies 4, 5, 9, 17, 28, 30, 32 and 33, and high glycine-tyrosine (HGT), which includes subfamilies 6, 7, 8, 19, 20 and 21. KRTAP16-1 is a 517 amino acid protein that belongs to the KRTAP type 10 family.

## REFERENCES

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- Rogers, M.A., et al. 2006. Human hair keratin-associated proteins (KAPs). *Int. Rev. Cytol.* 251: 209-263.
- Wu, D.D., et al. 2008. Molecular evolution of the keratin associated protein gene family in mammals, role in the evolution of mammalian hair. *BMC Evol. Biol.* 8: 241.

## CHROMOSOMAL LOCATION

Genetic locus: KRTAP16-1 (human) mapping to 17q21.2.

## SOURCE

KRTAP16-1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of KRTAP16-1 of human origin.

## STORAGE

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

## 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-247507 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

KRTAP16-1 (C-20) is recommended for detection of KRTAP16-1 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).

KRTAP16-1 (C-20) is also recommended for detection of KRTAP16-1 in additional species, including equine.

Molecular Weight of KRTAP16-1: 54 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.