

# UBAP1 siRNA (h): sc-92628

## BACKGROUND

Ubiquitin (Ub) is among the most phylogenetically conserved proteins known. The primary function of ubiquitin is to clear abnormal, foreign and improperly folded proteins by targeting them for degradation by the 26S Proteasome. Encoded by four genes, ubiquitin is synthesized as precursor proteins that consist of either single ubiquitin moieties fused 5' to unrelated carboxyl extension proteins, known as UBA type, or polyubiquitin chains that are cleaved into moieties of the UBB or UBC types. As a member of the UBA (ubiquitin-associated) domain family, UBAP1 (ubiquitin-associated protein 1), also known as NAG20 (nasopharyngeal carcinoma-associated gene 20 protein), is a 502 amino acid protein that is encoded by a gene that maps within a region on human chromosome 9 that undergoes loss of heterozygosity in nasopharyngeal carcinoma. This suggests that the UBAP1 gene may be a tumor suppressor gene that when lost leads to malignant transformation. There are two isoforms of UBAP1 that are produced as a result of alternative splicing events.

## REFERENCES

1. Qian, J., et al. 2001. Isolation and characterization of a novel cDNA, UBAP1, derived from the tumor suppressor locus in human chromosome 9p21-22. *J. Cancer Res. Clin. Oncol.* 127: 613-618.
2. Qian, J., et al. 2001. Cloning and expression analysis of a novel gene, UBAP1, possibly involved in ubiquitin pathway. *Sheng Wu Hua Xue Yu Sheng Wu Wu Li Xue Bao* 33: 147-152.
3. Qian, J., et al. 2002. Identification of digital differential expression patterns of a novel human gene (UBAP1) by an expressed sequence tag strategy. *Ai Zheng* 21: 225-228.

## CHROMOSOMAL LOCATION

Genetic locus: UBAP1 (human) mapping to 9p13.3.

## PRODUCT

UBAP1 siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see UBAP1 shRNA Plasmid (h): sc-92628-SH and UBAP1 shRNA (h) Lentiviral Particles: sc-92628-V as alternate gene silencing products.

For independent verification of UBAP1 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-92628A, sc-92628B and sc-92628C.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNases and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

UBAP1 siRNA (h) is recommended for the inhibition of UBAP1 expression in human cells.

## SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10  $\mu$ M in 66  $\mu$ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

## GENE EXPRESSION MONITORING

UBAP1 (D-8): sc-390350 is recommended as a control antibody for monitoring of UBAP1 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor UBAP1 gene expression knockdown using RT-PCR Primer: UBAP1 (h)-PR: sc-92628-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS

1. Xiong, X., et al. 2020. Ubiquitin-binding associated protein 2 regulates KRAS activation and macropinocytosis in pancreatic cancer. *FASEB J.* 34: 12024-12039.

## 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) for detailed protocols and support products.