SANTA CRUZ BIOTECHNOLOGY, INC.

AUP1 siRNA (h): sc-94537

BACKGROUND

AUP1 (ancient ubiquitous protein 1) is a 476 amino acid protein that is encoded by a gene sharing homology with a conserved region of the ancient archain 1 gene (which encodes a protein known as COPD). Expressed throughout the body, AUP1 binds a membrane-proximal sequence found in the cytoplasmic tail of Integrin αIIb subunits and, through this binding, may mediate Integrin-controlled platelet aggregation and thrombus formation. In addition, AUP1 contains one CUE (coupling of ubiquitin conjugation to ER degradation) domain; a motif that is characteristically involved in trafficking and ubiquitination pathways, suggesting a possible role for AUP1 in binding of ubiquitin-conjugating enzymes. Two isoforms of AUP1 are expressed due to alternative splicing events.

REFERENCES

1. Radice, P., et al. 1995. The human archain gene, ARCN1, has highly conserved homologs in rice and *Drosophila*. Genomics 26: 101-106.
2. Jang, W., et al. 1996. Aup1, a novel gene on mouse chromosome 6 and human chromosome 2p13. Genomics 36: 366-368.
3. Tunnacliffe, A., et al. 1996. The coatomer protein δ-COP, encoded by the archain gene, is conserved across diverse eukaryotes. Mamm. Genome 7: 784-786.
4. Kato, A., et al. 2002. Ancient ubiquitous protein 1 binds to the conserved membrane-proximal sequence of the cytoplasmic tail of the integrin α subunits that plays a crucial role in the inside-out signaling of α IIbβ 3. J. Biol. Chem. 277: 28934-28941.
5. Karpisheva, K.V., et al. 2002. A new human cellular protein AUP1. II. cDNA cloning, genomic organization of Aup1 gene ans preliminary characterization of human AUP1 protein. Tsitologiia 44: 839-845.
6. Karpisheva, K.V., et al. 2002. A new human cellular protein AUP1. III. The intracellular localization of AUP1 protein in different human and rat cell lines. Tsitologiia 44: 846-851.
7. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602434. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: AUP1 (human) mapping to 2p13.1.

PRODUCT

AUP1 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see AUP1 shRNA Plasmid (h): sc-94537-SH and AUP1 shRNA (h) Lentiviral Particles: sc-94537-V as alternate gene silencing products.

For independent verification of AUP1 (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-94537A, sc-94537B and sc-94537C.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

AUP1 siRNA (h) is recommended for the inhibition of AUP1 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 µM in 66 µl. 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor AUP1 gene expression knockdown using RT-PCR Primer: AUP1 (h)-PR: sc-94537-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Zhong, Y., et al. 2015. Identification of ERAD components essential for dislocation of the null Hong Kong variant of α-1-antitrypsin (NHK). Biochem. Biophys. Res. Commun. 458: 424-428.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.