SANTA CRUZ BIOTECHNOLOGY, INC.

APC16 siRNA (h): sc-90685

BACKGROUND

APC16, also known as ANAPC16 (anaphase promoting complex subunit 16), MSAG, cyclosome subunit 16 or metabolic syndrome-associated protein, is a 110 amino acid protein belonging to the APC16 family. Encoded by a gene that maps to human chromosome 10q22.1, APC16 contains four putative myristoylation sites and three phosphorylation sites. Highly conserved among mammalian species, APC16 of human, orangutan, monkey, mouse, horse and dog origin are identical. APC16 is a component of the anaphase promoting complex/cyclosome (APC/C), which is a cell cycle-regulated E3 ubiquitin ligase that controls cell cycle progression through mitosis and G_1. The APC/C complex mediates ubiquitination and degradation of target proteins. Composed of a minimum of twelve subunits, APC/C largely assists Lys-11-linked polyubiquitin chain formation, as well as Lys-48- and Lys-63-linked polyubiquitin chain formation. APC16 associates with APC/C independently of ANAPC2 and APC11.

REFERENCES

1. Riewald, M., et al. 2003. Activated protein C signals through the thrombin receptor PAR1 in endothelial cells. J. Endotoxin Res. 9: 317-321.
2. Sveiczer, A., et al. 2004. Modelling the fission yeast cell cycle. Brief. Funct. Genomic. Proteomic. 2: 298-307.
3. Cui, X.Y., et al. 2009. Identification of a novel gene, MSAG, regulated by high levels of glucose and Insulin. Biochemistry 74: 22-28.
4. Zhang, Z., et al. 2010. The APC/C subunit Cdc16/Cut9 is a contiguous tetratricopeptide repeat superhelix with a homodimer interface similar to Cdc27. EMBO J. 29: 3733-3744.
5. Hubner, N.C., et al. 2010. Quantitative proteomics combined with BAC TransgeneOmics reveals *in vivo* protein interactions. J. Cell Biol. 189: 739-754.
6. Kops, G.J., et al. 2010. APC16 is a conserved subunit of the anaphase-promoting complex/cyclosome. J. Cell Sci. 123: 1623-1633.

CHROMOSOMAL LOCATION

Genetic locus: ANAPC16 (human) mapping to 10q22.1.

PRODUCT

APC16 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 APC16 shRNA Plasmid (h): sc-90685-SH and APC16 shRNA (h) Lentiviral Particles: sc-90685-V as alternate gene silencing products.

For independent verification of APC16 (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-90685A, sc-90685B and sc-90685C.

PROTOCOLS

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

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

APC16 siRNA (h) is recommended for the inhibition of APC16 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 APC16 gene expression knockdown using RT-PCR Primer: APC16 (h)-PR: sc-90685-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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