SANTA CRUZ BIOTECHNOLOGY, INC.

APC13 siRNA (h): sc-78311

BACKGROUND

Composed of more than eleven subunits, the anaphase-promoting complex (APC), also known as the cyclosome, acts in a cell-cycle dependent manner to promote the separation of sister chromatids during the transition between metaphase and anaphase in mitosis. The APC accomplishes this progression through the ubiquitination of mitotic cyclins and other regulatory proteins that are targeted for destruction during cell division. The APC is phosphorylated, and thus activated, by protein kinases Cdk1, cyclin B and polo-like kinase (Plk) and is under tight control by a number of regulatory factors, including p55 CDC, cadherin and MAD2. APC13 (Anaphase-promoting complex subunit 13), also known as ANAPC13 or SWM1, is a 74 amino acid nuclear protein that functions as a component of the APC complex.

REFERENCES

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3. Peters, J.M. 1999. Subunits and substrates of the anaphase-promoting complex. Exp. Cell Res. 248: 339-349.
4. Fang, G., et al. 1999. Control of mitotic transitions by the anaphase-promoting complex. Philos. Trans. R. Soc. Lond., B, Biol. Sci. 354: 1583-1590.
5. Jorgensen, P.M., et al. 2001. Characterization of the human APC1, the largest subunit of the anaphase-promoting complex. Gene 262: 51-59.
6. Golan, A., et al. 2002. The cyclin-ubiquitin ligase activity of cyclosome/APC is jointly activated by protein kinases Cdk1/cyclin B and Plk. J. Biol. Chem. 277: 15552-15557.
7. Bolte, M., et al. 2002. Inhibition of APC-mediated proteolysis by the meiosis-specific protein kinase Ime2. Proc. Natl. Acad. Sci. USA 99: 4385-4390.
8. Schwickart, M., et al. 2004. Swm1/Apc13 is an evolutionarily conserved subunit of the anaphase-promoting complex stabilizing the association of Cdc16 and Cdc27. Mol. Cell. Biol. 24: 3562-3576.

CHROMOSOMAL LOCATION

Genetic locus: ANAPC13 (human) mapping to 3q22.2.

PRODUCT

APC13 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 APC13 shRNA Plasmid (h): sc-78311-SH and APC13 shRNA (h) Lentiviral Particles: sc-78311-V as alternate gene silencing products.

For independent verification of APC13 (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-78311A, sc-78311B and sc-78311C.

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

APC13 siRNA (h) is recommended for the inhibition of APC13 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 APC13 gene expression knockdown using RT-PCR Primer: APC13 (h)-PR: sc-78311-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.

PROTOCOLS

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