SANTA CRUZ BIOTECHNOLOGY, INC.

p400 siRNA (m): sc-62744

BACKGROUND

NuAR is a multi-protein histone acetyltransferase complex that functions to acetylate the nucleosomal Histones H4 and H2A, thereby activating transcription of select target genes. p400, also known as EP400 (E1A binding protein p400) or mDomino, localizes to the nucleus and is a component of the NuAR complex. Expressed in brain, liver, thymus, lung, spleen, colon and kidney, p400 regulates the transcriptional activity of proteins such as MZF-1 and contributes to the ATPase and helicase activities of NuA4. p400 is a SWI2/SNF2-related protein that can interact with the adenovirus oncoprotein E1A, thus activating the proapoptotic activity of E1A. The ability of p400 to regulate transcriptional and apoptotic activity suggests that the NuAR complex may be a crucial component of cell proliferation, transformation and, possibly, carcinogenesis. Five isoforms of p400 exist due to alternative splicing events.

REFERENCES

1. Ogawa, H., et al. 2003. A SWI2/SNF2-type ATPase/helicase protein, mDomino, interacts with myeloid zinc finger protein 2A (MZF-2A) to regulate its transcriptional activity. Genes Cells 8: 325-339.
2. Chan, H.M., et al. 2005. The p400 E1A-associated protein is a novel component of the p53→p21 senescence pathway. Genes Dev. 19: 196-201.
3. Samuelson, A.V., et al. 2005. p400 is required for E1A to promote apoptosis. J. Biol. Chem. 280: 21915-21923.
4. Tyteca, S., et al. 2006. Tip60 and p400 are both required for UV-induced apoptosis but play antagonistic roles in cell cycle progression. EMBO J. 25: 1680-1689.
5. Turnell, A.S., et al. 2006. Roles for the coactivators CBP and p300 and the APC/C E3 ubiquitin ligase in E1A-dependent cell transformation. Br. J. Cancer 95: 555-560.
6. Flinterman, M.B., et al. 2007. p400 function is required for the adenovirus E1A-mediated suppression of EGFR and tumour cell killing. Oncogene 26: 6863-6874.
7. Ueda, T., et al. 2007. Critical role of the p400/mDomino chromatin-remodeling ATPase in embryonic hematopoiesis. Genes Cells 12: 581-592.

CHROMOSOMAL LOCATION

Genetic locus: Ep400 (mouse) mapping to 5 F.

PRODUCT

p400 siRNA (m) 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 p400 shRNA Plasmid (m): sc-62744-SH and p400 shRNA (m) Lentiviral Particles: sc-62744-V as alternate gene silencing products.

For independent verification of p400 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-62744A, sc-62744B and sc-62744C.

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

p400 siRNA (m) is recommended for the inhibition of p400 expression in mouse 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 p400 gene expression knockdown using RT-PCR Primer: p400 (m)-PR: sc-62744-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.