SANTA CRUZ BIOTECHNOLOGY, INC.

CROP siRNA (m): sc-142578

BACKGROUND

CROP (Cisplatin resistance-associated overexpressed protein), also designated cAMP regulatory element-associated protein 1 (CREAP-1), Okadaic acid-inducible phosphoprotein OA48-18 or Luc7-like protein 3 (LUC7L3), is a 432 amino acid protein that belongs to the Luc7 family. It is ubiquitously expressed and localizes to the nucleus. The N-terminal half of the CROP protein contains cysteine/histidine motifs and leucine zipper-like repeats, while the C-terminal half is mostly hydrophilic and comprises domains rich in lysine/glutamate residues, arginine/glutamate residues and arginine/serine residues. CROP binds to cAMP regulatory element DNA sequence and may be involved in RNA splicing. The activity of CROP is modulated upon phosphorylation by SRPK1, SRPK2 and Clk1.

REFERENCES

1. Nishii, Y., et al. 2000. CROP/Luc7A, a novel serine/arginine-rich nuclear protein, isolated from cisplatin-resistant cell line. FEBS Lett. 465: 153-156.
2. Chin, L.S., et al. 2000. Identification of okadaic-acid-induced genes by mRNA differential display in glioma cells. J. Biomed. Sci. 7: 152-159.
3. Umehara, H., et al. 2003. Effect of cisplatin treatment on speckled distribution of a serine/arginine-rich nuclear protein CROP/Luc7A. Biochem. Biophys. Res. Commun. 301: 324-329.
4. Kimura, E., et al. 2004. Serine-arginine-rich nuclear protein Luc7l regulates myogenesis in mice. Gene 341: 41-47.
5. Shipman, K.L., et al. 2006. Identification of a family of DNA-binding proteins with homology to RNA splicing factors. Biochem. Cell Biol. 84: 9-19.
6. Matsuoka, S., et al. 2007. ATM and ATR substrate analysis reveals extensive protein networks responsive to DNA damage. Science 316: 1160-1166.
7. Webby, C.J., et al. 2009. Jmjd6 catalyses lysyl-hydroxylation of U2AF65, a protein associated with RNA splicing. Science 325: 90-93.

CHROMOSOMAL LOCATION

Genetic locus: Luc7l3 (mouse) mapping to 11 D.

PRODUCT

CROP 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 CROP shRNA Plasmid (m): sc-142578-SH and CROP shRNA (m) Lentiviral Particles: sc-142578-V as alternate gene silencing products.

For independent verification of CROP (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-142578A, sc-142578B and sc-142578C.

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

CROP siRNA (m) is recommended for the inhibition of CROP 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 CROP gene expression knockdown using RT-PCR Primer: CROP (m)-PR: sc-142578-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.