SANTA CRUZ BIOTECHNOLOGY, INC.

SAP 30L siRNA (m): sc-76448

BACKGROUND

In the intact cell, DNA closely associates with histones and other nuclear proteins to form chromatin. The remodeling of chromatin is believed to be a critical component of transcriptional regulation and a major source of this remodeling is brought about by the acetylation of nucleosomal histones. Acetylation of lysine residues in the amino terminal tail domain of histone results in an allosteric change in the nucleosomal conformation and an increased accessiblity to transcription factors by DNA. Conversely, the deacetylation of histones is associated with transcriptional silencing. Chromatin structure alteration may be brought about by the action of ATP-dependent multiprotein complexes. One such complex is the mSin3 corepressor complex, which contains mSin3, the histone deacetylases HDAC1 and HDAC2, the associated proteins SAP 30 (Sin3A-associated protein p30) and SAP 18, and the putative helicase Mi2. SAP 30L (Sin3A-associated protein p30-like protein) is a 183 amino acid nuclear protein that plays a role in the recruitment of HDAC to the nucleolus. SAP 30L is expressed widely, with the highest levels in testis.

REFERENCES

1. Lindfors, K., et al. 2003. TGF-β induces the expression of SAP 30L, a novel nuclear protein. BMC Genomics 4: 53.
2. Assmann, E.M., et al. 2006. FEZ1 dimerization and interaction with transcription regulatory proteins involves its coiled-coil region. J. Biol. Chem. 281: 9869-9881.
3. Viiri, K.M., et al. 2006. SAP 30L interacts with members of the Sin3A corepressor complex and targets Sin3A to the nucleolus. Nucleic Acids Res. 34: 3288-3298.
4. Korkeamäki, H., et al. 2008. Alternative mRNA splicing of SAP 30L regulates its transcriptional repression activity. FEBS Lett. 582: 379-384.
5. Cetin, E., et al. 2008. Deletion mapping of chromosome 4q22-35 and identification of four frequently deleted regions in head and neck cancers. Neoplasma 55: 299-304.
6. Viiri, K.M., et al. 2009. Phylogenetic analysis of the SAP 30 family of transcriptional regulators reveals functional divergence in the domain that binds the nuclear matrix. BMC Evol. Biol. 9: 149.
7. Viiri, K.M., et al. 2009. DNA-binding and -bending activities of SAP 30L and SAP 30 are mediated by a zinc-dependent module and monophosphoinositides. Mol. Cell. Biol. 29: 342-356.
8. He, Y., et al. 2009. Solution structure of a novel zinc finger motif in the SAP 30 polypeptide of the Sin3 corepressor complex and its potential role in nucleic acid recognition. Nucleic Acids Res. 37: 2142-2152.

CHROMOSOMAL LOCATION

Genetic locus: Sap30l (mouse) mapping to 11 B1.3.

PROTOCOLS

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

PRODUCT

SAP 30L 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 SAP 30L shRNA Plasmid (m): sc-76448-SH and SAP 30L shRNA (m) Lentiviral Particles: sc-76448-V as alternate gene silencing products.

For independent verification of SAP 30L (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-76448A, sc-76448B and sc-76448C.

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

SAP 30L siRNA (m) is recommended for the inhibition of SAP 30L 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 SAP 30L gene expression knockdown using RT-PCR Primer: SAP 30L (m)-PR: sc-76448-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.