SANTA CRUZ BIOTECHNOLOGY, INC.

ZNF33A siRNA (h): sc-90493

BACKGROUND

Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. The majority of zinc-finger proteins contain a Krüppel-type DNA binding domain and a KRAB domain, which is thought to interact with KAP1, thereby recruiting histone modifying proteins. ZNF33A (zinc finger protein 33A), also known as KOX2, KOX5, KOX31, NF11A, ZNF11, ZNF33, ZZAPK or ZNF11A, is a 810 amino acid nuclear protein belonging to the Krüppel C_2H_2-type zinc-finger protein family. Containing 16 C_2H_2-type zinc fingers and a KRAB domain, ZNF33A may be involved in transcriptional regulation. ZNF33A is suggested to increase E2F expression and induce cyclin E/Cdk2 activity. ZNF33A interacts with and is suppressed by MLTK.

REFERENCES

1. Kato, N., et al. 1990. Human proviral mRNAs down regulated in chorio-carcinoma encode a zinc finger protein related to Krüppel. Mol. Cell. Biol. 10: 4401-4405.
2. Thiesen, H.J. 1990. Multiple genes encoding zinc finger domains are expressed in human T cells. New Biol. 2: 363-374.
3. Tunnacliffe, A., et al. 1993. Duplicated KOX zinc finger gene clusters flank the centromere of human chromosome 10: evidence for a pericentric inversion during primate evolution. Nucleic Acids Res. 21: 1409-1417.
4. Jackson, M.S., et al. 1996. A 9.75-Mb map across the centromere of human chromosome 10. Genomics 33: 258-270.
5. Jackson, M.S., et al. 1999. Sequences flanking the centromere of human chromosome 10 are a complex patchwork of arm-specific sequences, stable duplications and unstable sequences with homologies to telomeric and other centromeric locations. Hum. Mol. Genet. 8: 205-215.
6. Yang, J.J. 2003. A novel zinc finger protein, ZZaPK, interacts with ZAK and stimulates the ZAK-expressing cells re-entering the cell cycle. Biochem. Biophys. Res. Commun. 301: 71-77.
7. Guy, J., et al. 2003. Genomic sequence and transcriptional profile of the boundary between pericentromeric satellites and genes on human chromosome arm 10p. Genome Res. 13: 159-172.

CHROMOSOMAL LOCATION

Genetic locus: ZNF33A (human) mapping to 10p11.1.

PRODUCT

ZNF33A 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 ZNF33A shRNA Plasmid (h): sc-90493-SH and ZNF33A shRNA (h) Lentiviral Particles: sc-90493-V as alternate gene silencing products.

For independent verification of ZNF33A (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-90493A, sc-90493B and sc-90493C.

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

ZNF33A siRNA (h) is recommended for the inhibition of ZNF33A 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 ZNF33A gene expression knockdown using RT-PCR Primer: ZNF33A (h)-PR: sc-90493-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.