SANTA CRUZ BIOTECHNOLOGY, INC.

SUHW1 siRNA (h): sc-76606

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 Krüeppel-type DNA binding domain and a KRAB domain, which is thought to interact with KAP1, thereby recruiting histone modifying proteins. SUHW1 (suppressor of hairy wing homolog 1), also known as ZNF280A (zinc-finger protein 280A), 3'OY11.1, ZNF636 or ZNF280, is a 542 amino acid protein that contains four C_2H_2-type zinc fingers. Localized to the nucleus, SUHW1 is thought to function as a transcription factor that may mediate transcriptional regulation events.

REFERENCES

1. Kawasaki, K., et al. 1997. One-megabase sequence analysis of the human immunoglobulin λ gene locus. Genome Res. 7: 250-261.
2. Dunham, I., et al. 1999. The DNA sequence of human chromosome 22. Nature 402: 489-495.
3. Sun, Y., et al. 2003. The KRAB domain of zinc finger gene ZNF268: a potential transcriptional repressor. IUBMB Life 55: 127-131.
4. Nakamura, M., et al. 2004. A novel subfamily of zinc finger genes involved in embryonic development. J. Cell. Biochem. 93: 887-895.
5. Englbrecht, C.C., et al. 2004. Conservation, diversification and expansion of C_2H_2 zinc finger proteins in the *Arabidopsis thaliana* genome. BMC Genomics 5: 39-39.
6. O'Geen, H., et al. 2007. Genome-wide analysis of KAP1 binding suggests autoregulation of KRAB-ZNFs. PLoS Genet. 3: e89.

CHROMOSOMAL LOCATION

Genetic locus: ZNF280A (human) mapping to 22q11.22.

PRODUCT

SUHW1 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 SUHW1 shRNA Plasmid (h): sc-76606-SH and SUHW1 shRNA (h) Lentiviral Particles: sc-76606-V as alternate gene silencing products.

For independent verification of SUHW1 (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-76606A, sc-76606B and sc-76606C.

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.

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.

APPLICATIONS

SUHW1 siRNA (h) is recommended for the inhibition of SUHW1 expression in human cells.

GENE EXPRESSION MONITORING

SUHW1 (H-3): sc-515056 is recommended as a control antibody for monitoring of SUHW1 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SUHW1 gene expression knockdown using RT-PCR Primer: SUHW1 (h)-PR: sc-76606-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.