SANTA CRUZ BIOTECHNOLOGY, INC.

ASF1B siRNA (h): sc-72563

BACKGROUND

ASF1A (anti-silencing function 1A) is a transcription factor that has been shown to bind with HeLa cell core Histones H3 and H4. Human ASF1A, which shares 71% amino acid identity to ASF1B, is believed to act as a chaperone to derepress genes since that action is observed in yeast Asf1A. High phosphorylation of ASF1A is demonstrated during the S phase of the cell cycle. Both ASF1A and B are phosophorylated by the proteins TLK1 and TLK2. The ASF1B gene has been mapped to chromosome 19p13.12 while the ASF1A gene localizes to 6q22.31. ASF1A and B cooperate in the formation of nucleosomes along with the protein CAF1.

REFERENCES

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2. Sen, S.P., et al. 2006. TLK1B promotes repair of UV-damaged DNA through chromatin remodeling by Asf1. BMC Mol. Biol. 7: 37.
3. Bao, Y., et al. 2006. Asf1, a loveseat for a histone couple. Cell 127: 458-460.
4. English, C.M., et al. 2006. Structural basis for the histone chaperone activity of Asf1. Cell 127: 495-508.
5. Antczak, A.J., et al. 2006. Structure of the yeast histone H3-ASF1 interaction: implications for chaperone mechanism, species-specific interactions, and epigenetics. BMC Struct. Biol. 6: 26.
6. Mousson, F., et al. 2007. The histone chaperone Asf1 at the crossroads of chromatin and DNA checkpoint pathways. Chromosoma 116: 79-93.
7. Agez, M., et al. 2007. Structure of the histone chaperone ASF1 bound to the histone H3 C-terminal helix and functional insights. Structure 15: 191-199.
8. Natsume, R., et al. 2007. Structure and function of the histone chaperone CIA/ASF1 complexed with histones H3 and H4. Nature 446: 338-341.

CHROMOSOMAL LOCATION

Genetic locus: ASF1B (human) mapping to 19p13.12.

PRODUCT

ASF1B 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 ASF1B shRNA Plasmid (h): sc-72563-SH and ASF1B shRNA (h) Lentiviral Particles: sc-72563-V as alternate gene silencing products.

For independent verification of ASF1B (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-72563A, sc-72563B and sc-72563C.

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

ASF1B siRNA (h) is recommended for the inhibition of ASF1B 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.

GENE EXPRESSION MONITORING

ASF1B (C-6): sc-393169 is recommended as a control antibody for monitoring of ASF1B 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 ASF1B gene expression knockdown using RT-PCR Primer: ASF1B (h)-PR: sc-72563-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.