SANTA CRUZ BIOTECHNOLOGY, INC.

ASF1A siRNA (h): sc-95595

BACKGROUND

ASF1A (anti-silencing function 1 homolog A), also known as CIA (CCG1-interacting factor A), is a 204 amino acid protein belonging to the ASF1 family. Encoded by a gene that maps to human chromosome 6q22.31, ASF1A is ubiquitously expressed and shares 71% amino acid identity with ASF1B. ASF1A functions as a transcription factor and binds with HeLa cell core histones H3 and H4, and likely acts as a chaperone that depresses genes. Exhibiting high phosphorylation during the S-phase of the cell cycle, both ASF1A and ASF1B are phosphorylated by TLK1 and TLK2. ASF1A and ASF1B both also cooperate with CAF1 in nucleosome formation.

REFERENCES

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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.
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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.
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CHROMOSOMAL LOCATION

Genetic locus: ASF1A (human) mapping to 6q22.31.

PRODUCT

ASF1A 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 ASF1A shRNA Plasmid (h): sc-95595-SH and ASF1A shRNA (h) Lentiviral Particles: sc-95595-V as alternate gene silencing products.

For independent verification of ASF1A (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-95595A, sc-95595B and sc-95595C.

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

ASF1A siRNA (h) is recommended for the inhibition of ASF1A 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

ASF1A/B (4A1/3): sc-53171 is recommended as a control antibody for monitoring of ASF1A 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 ASF1A gene expression knockdown using RT-PCR Primer: ASF1A (h)-PR: sc-95595-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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