SANTA CRUZ BIOTECHNOLOGY, INC.

ACF siRNA (h): sc-90813

BACKGROUND

ACF (APOBEC1 complementation factor), also known as ASP, ACF64, ACF65 or APOBEC1CF, is a 594 amino acid protein. Encoded by a gene that maps to human chromosome 10q11.23, ACF is widely expressed, with highest levels in brain, liver, pancreas, colon and spleen. Existing as six alternatively spliced isoforms, ACF exhibits subcellular localization in nucleus, endoplasmic reticulum, and cytoplasm. ACF is a vital part of the apolipoprotein B mRNA editing enzyme complex, which is responsible for postranscriptional editing in apoB mRNA. ACF binds to apoB mRNA and is potentially responsible for docking the catalytic subunit, APOBEC1, to mRNA for cytosine deamination. ACF also participates in protecting edited apoB mRNA from nonsense-mediated decay. ACF contains three RNA recognition motif (RRM) domains, which are necessary but not sufficient for binding to apoB mRNA. Additional residues in the pre-RRM and C-terminal regions are needed for RNA-binding and for complementing APOBEC1 activity.

REFERENCES

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7. Blanc, V., et al. 2003. A novel nuclear localization signal in the auxiliary domain of apobec-1 complementation factor regulates nucleocytoplasmic import and shuttling. J. Biol. Chem. 278: 41198-41204.
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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: A1CF (human) mapping to 10q11.23.

PRODUCT

ACF 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 ACF shRNA Plasmid (h): sc-90813-SH and ACF shRNA (h) Lentiviral Particles: sc-90813-V as alternate gene silencing products.

For independent verification of ACF (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-90813A, sc-90813B and sc-90813C.

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

ACF siRNA (h) is recommended for the inhibition of ACF 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 ACF gene expression knockdown using RT-PCR Primer: ACF (h)-PR: sc-90813-PR (20 µl, 600 bp). 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.