SANTA CRUZ BIOTECHNOLOGY, INC.

ABCF3 siRNA (h): sc-78379

BACKGROUND

ATP-binding cassette (ABC) transporters are an evolutionarily conserved family of widely-expressed proteins that use ATP hydrolysis to catalyze the transport of various molecules across extracellular and intracellular membranes. As the largest family of transmembrane proteins, ABC peptides comprise several subfamilies. Eukaryotic ABC transporters are largely responsible for trafficking hydrophobic compounds either within the cell, as part of a metabolic process, or outside the cell, for transport to other organs or for secretion from the body. The gene encoding ABCF3 maps to a region that correlates with cervical cancer. Also, high expression levels of ABCF3 have been found in cells of melanocytic origin, suggesting a role for ABCF3 in tumorigenesis. Two isoforms of ABCF3 exist due to alternative splicing events.

REFERENCES

1. Dean, M. and Allikmets, R. 1995 Evolution of ATP-binding cassette transporter genes. Curr. Opin. Genet. Dev. 5: 779-785.
2. Allikmets, R., Gerrard, B., Hutchinson, A. and Dean, M. 1996. Characterization of the human ABC superfamily: isolation and mapping of 21 new genes using the expressed sequence tags database. Hum. Mol. Genet. 5: 1649-1655.
3. Schmitz, G., Kaminski, W.E. and Orso, E. 2000. ABC transporters in cellular lipid trafficking. Curr. Opin. Lipidol. 11: 493-501.
4. Dean, M., Rzhetsky, A. and Allikmets, R. 2001. The human ATP-binding cassette (ABC) transporter superfamily. Genome Res. 11: 1156-1166.
5. Bunting, K.D. 2002. ABC transporters as phenotypic markers and functional regulators of stem cells. Stem Cells 20: 11-20.

CHROMOSOMAL LOCATION

Genetic locus: ABCF3 (human) mapping to 3q27.1.

PRODUCT

ABCF3 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 ABCF3 shRNA Plasmid (h): sc-78379-SH and ABCF3 shRNA (h) Lentiviral Particles: sc-78379-V as alternate gene silencing products.

For independent verification of ABCF3 (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-78379A, sc-78379B and sc-78379C.

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.

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

ABCF3 siRNA (h) is recommended for the inhibition of ABCF3 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 ABCF3 gene expression knockdown using RT-PCR Primer: ABCF3 (h)-PR: sc-78379-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.