SANTA CRUZ BIOTECHNOLOGY, INC.

ABCA13 siRNA (m): sc-140746

BACKGROUND

ABCA13 (ATP-binding cassette, sub-family A (ABC1), member 13) is a 5,058 amino acid protein, the largest ABC transporter protein, that belongs to the ABC transporter superfamily. The ABC1 subfamily is the only major ABC sub-family exclusive to multicellular eukaryotes. Encoded by a gene that maps to human chromosome 7p12.3, ABCA13 is expressed in testis, bone marrow and trachea and participates in ATP and nucleotide binding. ABCA13 is a multi-pass membrane protein that contains two ABC transporter domains and exists as three alternatively spliced isoforms. ABCA13 consists of at least 12 transmembrane α-helix domains, which probably arrange to form one main chamber that contains multiple binding sites for substrates. ABCA13 is predicted to have two large extracellular domains and two nucleotide binding domains, which is representative of ABCA proteins. ABCA13 may be linked to schizophrenia, bipolar disorder and depression.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Abca13 (mouse) mapping to 11 A1.

PRODUCT

ABCA13 siRNA (m) is a pool of 2 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 ABCA13 shRNA Plasmid (m): sc-140746-SH and ABCA13 shRNA (m) Lentiviral Particles: sc-140746-V as alternate gene silencing products.

For independent verification of ABCA13 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-140746A and sc-140746B.

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

ABCA13 siRNA (m) is recommended for the inhibition of ABCA13 expression in mouse 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 ABCA13 gene expression knockdown using RT-PCR Primer: ABCA13 (m)-PR: sc-140746-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.