SANTA CRUZ BIOTECHNOLOGY, INC.

OBFC2A siRNA (h): sc-94332

BACKGROUND

The SOSS complex is a multiprotein complex that promotes DNA repair and the G_2/M checkpoint, and functions downstream of the MRN complex. The SOSS complex associates with DNA lesions and influences diverse endpoints in the cellular DNA damage response, including cell-cycle checkpoint activation, recombinational repair and maintenance of genomic stability. A component of the SOSS complex, OBFC2A (oligonucleotide/oligosaccharide-binding fold-containing protein 2A), also known as SSBP2 (SOSS complex subunit B2), is a 204 amino acid protein that acts as a sensor of single-stranded DNA. OBFC2A binds to single-stranded DNA, particularly polypyrimidines, and is also required for efficient homologous recombination-dependent repair of double-strand breaks (DSBs) and ATM-dependent signaling pathways. Localizing to nucleus, OBFC2A is also found at nuclear foci following DNA damage.

REFERENCES

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: NABP1 (human) mapping to 2q32.3.

PRODUCT

OBFC2A 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 OBFC2A shRNA Plasmid (h): sc-94332-SH and OBFC2A shRNA (h) Lentiviral Particles: sc-94332-V as alternate gene silencing products.

For independent verification of OBFC2A (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-94332A, sc-94332B and sc-94332C.

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

OBFC2A siRNA (h) is recommended for the inhibition of OBFC2A 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 OBFC2A gene expression knockdown using RT-PCR Primer: OBFC2A (h)-PR: sc-94332-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.