SANTA CRUZ BIOTECHNOLOGY, INC.

FKBP7 siRNA (h): sc-94452

BACKGROUND

The EF-hand domain is a 12 amino acid loop motif that is commonly found in proteins that participate in calcium-binding events within the cell. EF-hand domains generally exist in a pair that, together, form a stable four-helix bundle that enables the binding of calcium ions. FKBP7 (FK506-binding protein 7), also known as FKBP23, is a 259 amino acid protein that localizes to the lumen of the endoplasmic reticulum and contains one PPIase FKBP-type domain and two EF-hand domains. One of several members of the FKBP-type peptidyl-prolyl *cis/trans* isomerase (PPIase) family, FKBP7 binds calcium and functions as a molecular chaperone, possibly accelerating the folding of proteins during protein synthesis. Multiple isoforms of FKBP7 exist due to alternative splicing events.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: FKBP7 (human) mapping to 2q31.2.

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.

PRODUCT

FKBP7 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 FKBP7 shRNA Plasmid (h): sc-94452-SH and FKBP7 shRNA (h) Lentiviral Particles: sc-94452-V as alternate gene silencing products.

For independent verification of FKBP7 (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-94452A, sc-94452B and sc-94452C.

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

FKBP7 siRNA (h) is recommended for the inhibition of FKBP7 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 FKBP7 gene expression knockdown using RT-PCR Primer: FKBP7 (h)-PR: sc-94452-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.