SANTA CRUZ BIOTECHNOLOGY, INC.

FKBP15 siRNA (h): sc-92734

BACKGROUND

Immunophilins are a highly conserved family of *cis-trans* peptidyl-prolyl isomerases which bind to and mediate the effects of immunosuppressive drugs such as cyclosporin, FK506 and Rapamycin. FKBP15, also known as FK506-binding protein 15, FK506-binding protein 133 kDa, FKBP133 or KIAA0674, is a 1,219 amino acid protein that localizes to cytoplasm, cell projections, axons and neuronal growth cones. FKBP15 likely regulates cytoskeletal organization of neuronal growth cones and has been found in the developing nervous system, predominantly in embryonic cerebral cortex, peripheral ganglia and hippocampus. Although FKBP15 contains one PPIase FKBP-type domain and is a member of the FKBP-type PPIase family, FKBP15 is inactive in terms of enzymatic, FK506-binding and PPIase activity. Three isoforms of FKBP15 exist due to alternative splicing events.

REFERENCES

1. Patterson, C.E., et al. 2002. Genomic organization of mouse and human 65 kDa FK506-binding protein genes and evolution of the FKBP multigene family. Genomics 79: 881-889.
2. Adams, B., et al. 2005. A novel class of dual-family immunophilins. J. Biol. Chem. 280: 24308-24314.
3. Nakajima, O., et al. 2006. FKBP133: a novel mouse FK506-binding protein homolog alters growth cone morphology. Biochem. Biophys. Res. Commun. 346: 140-149.
4. Kang, C.B., et al. 2008. FKBP family proteins: immunophilins with versatile biological functions. Neurosignals 16: 318-325.
5. Kozany, C., et al. 2009. Fluorescent probes to characterise FK506-binding proteins. Chembiochem 10: 1402-1410.

CHROMOSOMAL LOCATION

Genetic locus: FKBP15 (human) mapping to 9q32.

PRODUCT

FKBP15 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 FKBP15 shRNA Plasmid (h): sc-92734-SH and FKBP15 shRNA (h) Lentiviral Particles: sc-92734-V as alternate gene silencing products.

For independent verification of FKBP15 (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-92734A, sc-92734B and sc-92734C.

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

FKBP15 siRNA (h) is recommended for the inhibition of FKBP15 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 FKBP15 gene expression knockdown using RT-PCR Primer: FKBP15 (h)-PR: sc-92734-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.