SANTA CRUZ BIOTECHNOLOGY, INC.

TARSH siRNA (h): sc-77934

BACKGROUND

TARSH [ABI family, member 3 (NESH) binding protein], whose alternative names include target of Nesh-SH3, Nesh-binding protein, ABI gene family member 3-binding protein, NESHBP, FLJ41743, FLJ41754 or ABI3BP, is a 1,075 amino acid protein involved in cellular senescence and tumor suppression. Loss of TARSH expression may play a role in the pathogenesis of cancer, especially in thyroid and lung. TARSH acts as a signal transduction molecule and is presumed to interact with with Abi-3, a protein involved in inhibition of ectopic metastasis of tumor cells. TARSH is expressed in brain, lung, heart, liver, placenta, pancreas and kidney, and four TARSH isoforms exist as a result of alternative splicing. TARSH contains a SH3 binding motif and a nuclear targeting sequence. The gene encoding TARSH maps to human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci.

REFERENCES

1. De Jonghe, P., et al. 1997. Mutilating neuropathic ulcerations in a chromosome 3q13-q22 linked Charcot-Marie-Tooth disease type 2B family. J. Neurol. Neurosurg. Psychiatr. 62: 570-573.
2. Matsuda, S., et al. 2001. Cloning and sequencing of a novel human gene that encodes a putative target protein of Nesh-SH3. J. Hum. Genet. 46: 483-486.
3. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 606279. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Braga, E.A., et al. 2003. New tumor suppressor genes in hot spots of human chromosome 3: new methods of identification. Mol. Biol. 37: 194-211.
5. Tsend-Ayush, E., et al. 2004. Plasticity of human chromosome 3 during primate evolution. Genomics 83: 193-202.
6. Uekawa, N., et al. 2005. Expression of TARSH gene in MEFs senescence and its potential implication in human lung cancer. Biochem. Biophys. Res. Commun. 329: 1031-1038.

CHROMOSOMAL LOCATION

Genetic locus: ABI3BP (human) mapping to 3q12.2.

PRODUCT

TARSH 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 TARSH shRNA Plasmid (h): sc-77934-SH and TARSH shRNA (h) Lentiviral Particles: sc-77934-V as alternate gene silencing products.

For independent verification of TARSH (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-77934A, sc-77934B and sc-77934C.

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

TARSH siRNA (h) is recommended for the inhibition of TARSH 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.

GENE EXPRESSION MONITORING

TARSH (H-8): sc-398847 is recommended as a control antibody for monitoring of TARSH gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor TARSH gene expression knockdown using RT-PCR Primer: TARSH (h)-PR: sc-77934-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.