HRSP12 shRNA Plasmid (m): sc-146082-SH

BACKGROUND

HRSP12 (heat-responsive protein 12), also known as PSP, P14.5 or UK114 is a 137 amino acid protein that belongs to the UPF0076 (UK114) family and is expressed primarily in liver and kidney. Localized to the cytoplasm in highly differentiated cells and to the nucleus in less differentiated cells, HRSP12 functions as an endoribonuclease that inhibits translation by cleaving mRNA. Specifically, HRSP12 cleaves phosphodiester bonds in single-stranded mRNA, thereby breaking the mRNA and preventing protein synthesis. HRSP12 exists as a homotrimer and may be a tumor antigen involved in malignant neoplasms. This suggests a possible role in carcinogenesis.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: Hrsp12 (mouse) mapping to 15 B3.1.

PRODUCT

HRSP12 shRNA Plasmid (m) is a pool of 3 target-specific lentiviral vector plasmids each encoding 19-25 nt (plus hairpin) shRNAs designed to knock down gene expression. Each plasmid contains a puromycin resistance gene for the selection of cells stably expressing shRNA. Each vial contains 20 µg of lyophilized shRNA plasmid DNA. Suitable for up to 20 transfections. Also see HRSP12 siRNA (m): sc-146082 and HRSP12 shRNA (m) Lentiviral Particles: sc-146082-V as alternate gene silencing products.

RESEARCH USE

The purchase of this product conveys to the buyer the nontransferable right to use the purchased amount of the product and all replicates and derivatives for research purposes conducted by the buyer in his laboratory only (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party, or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.

STORAGE AND RESUSPENSION

Store lyophilized shRNA plasmid DNA at 4° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at 4° C for short term storage or -80° C for long term storage. Avoid repeated freeze thaw cycles.

Resuspend lyophilized shRNA plasmid DNA in 200 µl of the deionized water provided. Resuspension of the shRNA plasmid DNA in 200 µl of deionized water makes a 0.1 µg/µl solution in a 10 mM Tris, 1 mM EDTA buffered solution.

APPLICATIONS

HRSP12 shRNA Plasmid (m) is recommended for the inhibition of HRSP12 expression in mouse cells.

SUPPORT REAGENTS

For optimal shRNA Plasmid transfection efficiency, Santa Cruz Biotechnology’s shRNA Plasmid Transfection Reagent: sc-108061 (0.2 ml) and shRNA Plasmid Transfection Medium: sc-108062 (20 ml) are recommended. Control shRNAs are available as 20 µg lyophilized plasmid DNA. Each encodes a scrambled shRNA sequence that will not lead to the specific degradation of any known cellular mRNA. Control shRNA Plasmids include: sc-108060, sc-108065 and sc-108066.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor HRSP12 gene expression knockdown using RT-PCR Primer: HRSP12 (m)-PR: sc-146082-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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