SANTA CRUZ BIOTECHNOLOGY, INC.

RRBP1 siRNA (h): sc-76435

BACKGROUND

RRBP1 [ribosome binding protein 1 homolog (dog)], also known as ribosome-binding protein 1, ribosome receptor protein, ES/130-related protein, hES, DKFZp586A1420, FLJ36146, ES130, ES/130, MGC157720 or MGC157721, is a 1,410 amino acid single-pass type III membrane protein localizing in endoplasmic reticulum membrane. RRBP1 acts as a ribosome receptor by regulating interactions between the endoplasmic reticulum membrane and ribosomes, while enhancing secretory activity and playing a role in membrane biogenesis. RRBP1 has been found at high levels in placenta, pancreas and liver, and contains a novel microtubule-binding domain (MTB-1) for binding and modulating microtubules via associations with the endoplasmic reticulum. Multiple forms of RRBP1 exist; three of which can be attributed to alternative splicing events, while others are produced by removal of tandem repeats or partial intraexonic splicing.

REFERENCES

1. Savitz, A.J. and Meyer, D.I. 1990. Identification of a ribosome receptor in the rough endoplasmic reticulum. Nature 346: 540-544.
2. Basson, C.T., et al. 1996. Identification, characterization, and chromosomal localization of the human homolog (hES) of ES/130. Genomics 35: 628-631.
3. Langley, R., et al. 1998. Identification of multiple forms of 180-kDa ribosome receptor in human cells. DNA Cell Biol. 17: 449-460.
4. Ogawa-Goto, K., et al. 2007. p180 is involved in the interaction between the endoplasmic reticulum and microtubules through a novel microtubule-binding and bundling domain. Mol. Biol. Cell 18: 3741-3751.
5. Krasnov, G.S., et al. 2009. Colorectal cancer 2D-proteomics: identification of altered protein expression. Mol. Biol. 43: 348-356.

CHROMOSOMAL LOCATION

Genetic locus: RRBP1 (human) mapping to 20p12.1.

PRODUCT

RRBP1 shRNA Plasmid (h) 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 RRBP1 siRNA (h): sc-76435 and RRBP1 shRNA (h) Lentiviral Particles: sc-76435-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

RRBP1 shRNA Plasmid (h) is recommended for the inhibition of RRBP1 expression in human 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 RRBP1 gene expression knockdown using RT-PCR Primer: RRBP1 (h)-PR: sc-76435-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.