SANTA CRUZ BIOTECHNOLOGY, INC.

BMS1 siRNA (h): sc-90718

BACKGROUND

BMS1 (Ribosome biogenesis protein BMS1 homolog) is a 1,282 amino acid protein encoded by the human gene BMS1. BMS1 is a nuclear protein that belongs to the BMS1/TSR1 family (BMS1 subfamily). BMS1 is believed to act as a molecular switch during maturation of the 40S ribosomal subunit in the nucleolus. The 40S ribosomal subunit is an important member of the 80S ribosome complex, which also includes initiator tRNA and a 60S ribosomal subunit. The 80S ribosome is assembled by eukaryotic initiation factors (eIFs) at the initiation codon of mRNA in order to begin translation initiation. The joining of these ribosomal subunits requires eIF5B.

REFERENCES

1. Pestova, T.V., et al. 2000. The joining of ribosomal subunits in eukaryotes requires eIF5B. Nature 403: 332-335.
2. Crosier, M., et al. 2002. Human paralogs of KIAA0187 were created through independent pericentromeric-directed and chromosome-specific duplication mechanisms. Genome Res. 12: 67-80.
3. Strausberg, R.L., et al. 2002. Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences. Proc. Natl. Acad. Sci. USA 99: 16899-16903.
4. Andersen, J.S., et al. 2002. Directed proteomic analysis of the human nucleolus. Curr. Biol. 12: 1-11.
5. Unbehaun, A., et al. 2004. Release of initiation factors from 48S complexes during ribosomal subunit joining and the link between establishment of codon-anticodon base-pairing and hydrolysis of eIF2-bound GTP. Genes Dev. 18: 3078-3093.
6. Andersen, J.S., et al. 2005. Nucleolar proteome dynamics. Nature 433: 77-83.

CHROMOSOMAL LOCATION

Genetic locus: BMS1 (human) mapping to 10q11.21.

PRODUCT

BMS1 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 BMS1 shRNA Plasmid (h): sc-90718-SH and BMS1 shRNA (h) Lentiviral Particles: sc-90718-V as alternate gene silencing products.

For independent verification of BMS1 (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-90718A, sc-90718B and sc-90718C.

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

BMS1 siRNA (h) is recommended for the inhibition of BMS1 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

BMS1 (A-12): sc-271040 is recommended as a control antibody for monitoring of BMS1 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 BMS1 gene expression knockdown using RT-PCR Primer: BMS1 (h)-PR: sc-90718-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.