SANTA CRUZ BIOTECHNOLOGY, INC.

GTPBP10 siRNA (h): sc-89367

BACKGROUND

Small G proteins act as molecular switches for regulation of a variety of cellular processes, such as nuclear transport, signal transduction, membrane trafficking and protein synthesis. GTPBP10 (GTP-binding protein 10) is a 366 amino acid nuclear protein that belongs to the GTP1/OBG family. Containing one G (guanine nucleotide-binding) domain, GTPBP10 may be involved in ribosome maturation. The gene encoding GTPBP10 maps to human chromosome 7q21.13, which houses over 1,000 genes and comprises nearly 5% of the human genome. Chromosome 7 has been linked to osteogenesis imperfecta, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome. The deletion of a portion of the q arm of chromosome 7 is associated with Williams-Beuren syndrome, a condition characterized by mild mental retardation, an unusual comfort and friendliness with strangers and an elfin appearance.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: GTPBP10 (human) mapping to 7q21.13.

PROTOCOLS

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

PRODUCT

GTPBP10 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 GTPBP10 shRNA Plasmid (h): sc-89367-SH and GTPBP10 shRNA (h) Lentiviral Particles: sc-89367-V as alternate gene silencing products.

For independent verification of GTPBP10 (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-89367A, sc-89367B and sc-89367C.

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

GTPBP10 siRNA (h) is recommended for the inhibition of GTPBP10 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 GTPBP10 gene expression knockdown using RT-PCR Primer: GTPBP10 (h)-PR: sc-89367-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.