SANTA CRUZ BIOTECHNOLOGY, INC.

MPP10 siRNA (h): sc-94702

BACKGROUND

MPP10 (M-phase phosphoprotein 10), also known as MPHOSPH10, is a 681 amino acid protein that localizes to the fibrillar region of the nucleolus. Phosphorylated in the M (mitotic) phase of the cell cycle, MPP10 is a component of the 60-80S U3 small nucleolar ribonucleoprotein (U3 snoRNP) complex and is required for the early cleavages during pre-18S ribosomal RNA processing. MPP10 forms a heterotrimeric complex with IMP-3 and IMP-4, which may be required for its association with nucleolar components. The gene encoding MPP10 is localized to human chromosome 2, which houses over 500 genes and is the second smallest human chromosome. Mutations in several of the genes that map to chromosome 22 are involved in the development of Phelan-McDermid syndrome, Neurofibromatosis type 2, autism and schizophrenia.

REFERENCES

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8. Segerstolpe, A., et al. 2008. Mrd1p binds to pre-rRNA early during transcription independent of U3 snoRNA and is required for compaction of the pre-rRNA into small subunit processomes. Nucleic Acids Res. 36 4364-4380.

CHROMOSOMAL LOCATION

Genetic locus: MPHOSPH10 (human) mapping to 2p13.3.

PRODUCT

MPP10 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 MPP10 shRNA Plasmid (h): sc-94702-SH and MPP10 shRNA (h) Lentiviral Particles: sc-94702-V as alternate gene silencing products.

For independent verification of MPP10 (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-94702A, sc-94702B and sc-94702C.

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

MPP10 siRNA (h) is recommended for the inhibition of MPP10 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

MPP10 (TJ-1): sc-81847 is recommended as a control antibody for monitoring of MPP10 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 MPP10 gene expression knockdown using RT-PCR Primer: MPP10 (h)-PR: sc-94702-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.