SANTA CRUZ BIOTECHNOLOGY, INC.

MPPE1 siRNA (h): sc-75819

BACKGROUND

Metallophosphoesterases (MPPEs) are dynamic enzymes that catalyze a variety of cellular reactions and contain a conserved β-α-β-α-β fold. The MPPE superfamily is divided into two subfamilies: phosphomonoesterases and phosphodiesterases. Each MPPE has a dimetal center located approximately at the C-terminal end of the parallel β-strands of the fold. MPPE1 (metallophosphoesterase 1) is a 396 amino acid multipass membrane enzyme that requires two divalent metals as cofactors. MPPE1 contains a N-terminal signal peptide, a typical metallophosphoesterase domain and a C-terminal transmembrane domain. Expression of MPPE1 seems to be limited to brain. There are five isoforms of MPPE1 that are produced as a result of alternative splicing events.

REFERENCES

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: MPPE1 (human) mapping to 18p11.21.

PRODUCT

MPPE1 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 MPPE1 shRNA Plasmid (h): sc-75819-SH and MPPE1 shRNA (h) Lentiviral Particles: sc-75819-V as alternate gene silencing products.

For independent verification of MPPE1 (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-75819A, sc-75819B and sc-75819C.

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

MPPE1 siRNA (h) is recommended for the inhibition of MPPE1 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 MPPE1 gene expression knockdown using RT-PCR Primer: MPPE1 (h)-PR: sc-75819-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.