SANTA CRUZ BIOTECHNOLOGY, INC.

PSTPIP2 siRNA (h): sc-76282

BACKGROUND

PSTPIP2 (proline-serine-threonine phosphatase interacting protein 2), also known as MAYP, is a 334 amino acid peripheral membrane protein that is widely expressed and contains an FCH (Fes/CIP4 homology) domain. Tyrosine-phosphorylated in macrophages, PSTPIP2 is a major F-Actin-associated protein that may participate in regulating macrophage colony stimulating factor (M-CSF-induced) reorganization of the Actin cytoskeleton. Mutations in the gene encoding PSTPIP2 may be the cause of SAPHO syndrome (synovitis, acne, pustulosis, hyperostosis and osteitis), a rare inflammatory disorder that mainly affects bone, skin, and joints. Existing as two alternatively spliced isoforms, PSTPIP2 is encoded by a gene located on human chromosome 18, which houses over 300 protein-coding genes and contains nearly 76 million bases.

REFERENCES

1. Wu, Y., et al. 1998. PSTPIP2, a second tyrosine phosphorylated, cytoskeletal-associated protein that binds a PEST-type protein-tyrosine phosphatase. J. Biol. Chem. 273: 30487-30496.
2. Yeung, Y.G., et al. 1998. A novel macrophage Actin-associated protein (MAYP) is tyrosine-phosphorylated following colony stimulating factor-1 stimulation. J. Biol. Chem. 273: 30638-30642.
3. Chitu, V., et al. 2005. The PCH family member MAYP/PSTPIP2 directly regulates F-Actin bundling and enhances filopodia formation and motility in macrophages. Mol. Biol. Cell 16: 2947-2959.
4. Grosse, J., et al 2006. Mutation of mouse Mayp/Pstpip2 causes a macrophage autoinflammatory disease. Blood 107: 3350-3358.
5. Ferguson, P.J., et al. 2006. A missense mutation in PSTPIP2 is associated with the murine autoinflammatory disorder chronic multifocal osteomyelitis. Bone 38: 41-47.
6. Jansson, A., et al. 2007. Classification of non-bacterial osteitis: retrospective study of clinical, immunological and genetic aspects in 89 patients. Rheumatology 46: 154-160.

CHROMOSOMAL LOCATION

Genetic locus: PSTPIP2 (human) mapping to 18q21.1.

PRODUCT

PSTPIP2 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 PSTPIP2 shRNA Plasmid (h): sc-76282-SH and PSTPIP2 shRNA (h) Lentiviral Particles: sc-76282-V as alternate gene silencing products.

For independent verification of PSTPIP2 (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-76282A, sc-76282B and sc-76282C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

PSTPIP2 siRNA (h) is recommended for the inhibition of PSTPIP2 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 PSTPIP2 gene expression knockdown using RT-PCR Primer: PSTPIP2 (h)-PR: sc-76282-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.