SANTA CRUZ BIOTECHNOLOGY, INC.

PEF siRNA (h): sc-88695

BACKGROUND

PEF, also known as PEF1 (penta-EF-hand domain containing 1), PEF1A, ABP32, peflin or PEF protein with a long N-terminal hydrophobic domain, is a 284 amino acid peripheral membrane protein that belongs to the penta-EF-hand (PEF) protein family. Encoded by a gene that maps to human chromosome 1p35.2, PEF contains an N-terminal hydrophobic domain, five C-terminal EF-hand motifs and several potential phosphorylation sites. Ubiquitously expressed, PEF localizes to nucleus as a monomer, but also colocalizes to ALG-2 as a heterodimer in cytoplasm. PEF and ALG-2 share approximately 30% amino acid identity, and PEF dissociates from ALG-2 in the presence of Ca^{2+}. PEF may modulate ALG-2 function in Ca^{2+} signaling and is suggested to participate in calcium ion binding.

REFERENCES

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7. Shibata, H., et al. 2004. The penta-EF-hand protein ALG-2 interacts with a region containing PxY repeats in Alix/AIP1, which is required for the subcellular punctate distribution of the amino-terminal truncation form of Alix/AIP1. J. Biochem. 135: 117-128.
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CHROMOSOMAL LOCATION

Genetic locus: PEF1 (human) mapping to 1p35.2.

RESEARCH USE

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

PRODUCT

PEF 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 PEF shRNA Plasmid (h): sc-88695-SH and PEF shRNA (h) Lentiviral Particles: sc-88695-V as alternate gene silencing products.

For independent verification of PEF (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-88695A, sc-88695B and sc-88695C.

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

PEF siRNA (h) is recommended for the inhibition of PEF 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 PEF gene expression knockdown using RT-PCR Primer: PEF (h)-PR: sc-88695-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.