

PITSLRE A siRNA (h): sc-37590

BACKGROUND

The PITSLRE β 1 protein, a distantly related member of the Cdk family of protein kinases, induces apoptosis after low levels of ectopic expression. Apoptosis, or programmed cell death, is similarly induced by ectopic expression of an amino terminal deletion mutant retaining the catalytic and carboxy-terminal domains of PITSLRE β 1, but not by other mutants lacking Histone H1 kinase activity or by other Cdk family members. The terminology for the ten isoforms of the PITSLRE subfamily of proteins is based on the conserved PSTAIRE box region of Cdc2 p34. Depending on which of the PITSLRE genes produce the protein, the cDNA and protein are designated α , β or γ (i.e., PITSLRE A gene, α ; PITSLRE B gene, β and PITSLRE C gene, γ). Some of the isoforms such as PITSLRE α 1 (T cells) and PITSLRE β 1 (B cells and brain), are expressed in specific cell types, while others are expressed ubiquitously.

REFERENCES

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3. Ellis, R.E., et al. 1991. Mechanisms and functions of cell death. *Annu. Rev. Cell Biol.* 9: 663-698.
4. Meyerson, M., et al. 1992. A family of human Cdc2-related protein kinases. *EMBO J.* 11: 2909-2917.
5. Raff, M.C., et al. 1993. Programmed cell death and the control of cell survival: lessons from the nervous system. *Science* 262: 695-700.
6. Reed, J.C. 1994. Bcl-2 and the regulation of programmed cell death. *J. Cell Biol.* 124: 1-6.
7. Xiang, J., et al. 1994. Molecular cloning and expression of alternatively spliced PITSLRE protein kinase isoforms. *J. Biol. Chem.* 269: 15786-15794.
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CHROMOSOMAL LOCATION

Genetic locus: CDK11B (human) mapping to 1p36.33.

PRODUCT

PITSLRE A 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PITSLRE A shRNA Plasmid (h): sc-37590-SH and PITSLRE A shRNA (h) Lentiviral Particles: sc-37590-V as alternate gene silencing products.

For independent verification of PITSLRE A (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-37590A, sc-37590B and sc-37590C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

PITSLRE A siRNA (h) is recommended for the inhibition of PITSLRE A 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 μ M in 66 μ l. 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

PITSLRE (B-9): sc-377296 is recommended as a control antibody for monitoring of PITSLRE A 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 PITSLRE A gene expression knockdown using RT-PCR Primer: PITSLRE A (h)-PR: sc-37590-PR (20 μ l, 461 bp). 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.