

Pdcd-5 siRNA (h): sc-97752

BACKGROUND

Pdcd-5 (programmed cell death protein 5), also known as TFAR19, is a 125 amino acid protein that is widely expressed with highest expression in heart, testis, kidney, pituitary gland, adrenal gland and placenta. Belonging to the Pdcd family, Pdcd-5 is activated in cells undergoing apoptosis. Pdcd-5 may be an important regulator of TIP60 by inhibiting its proteasome-dependent degradation. TIP60, also known as K(lysine) acetyltransferase 5, is a protein involved in transcription, DNA damage response and cell cycle control. Pdcd-5 is encoded by a gene located on human chromosome 19q13.11. Chromosome 19 consists of approximately 63 million bases and makes up over 2% of human genomic DNA. Chromosome 19 is recognized for having the greatest gene density of the human chromosomes. It is the genetic home for a number of immunoglobulin superfamily members including the killer cell and leukocyte Ig-like receptors, a number of ICAMs, the CEACAM and PSG family and Fcα receptors.

REFERENCES

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2. Chen, Y., et al. 2001. Nuclear translocation of PDCD5 (TFAR19): an early signal for apoptosis? *FEBS Lett.* 509: 191-196.
3. Rui, M., et al. 2002. Transfer of anti-TFAR19 monoclonal antibody into HeLa cells by *in situ* electroporation can inhibit the apoptosis. *Life Sci.* 71: 1771-1778.
4. Feng, Y.M., et al. 2002. Soluble expression in *Escherichia coli*, purification and characterization of a human TF-1 cell apoptosis-related protein TFAR19. *Protein Expr. Purif.* 25: 323-329.
5. Tian, H.K., et al. 2002. TFAR19 enhances the opening of permeability transition pore in the mitochondrial membrane of mice liver. *Sheng Wu Hua Xue Yu Sheng Wu Wu Li Xue Bao* 34: 279-284.
6. Gu, L., et al. 2004. FTIR spectroscopy studies on the apoptosis-promoting effect of TFAR19 on the erythroleukemia cell line MEL. *Sheng Wu Yi Xue Gong Cheng Xue Za Zhi* 21: 449-452.

CHROMOSOMAL LOCATION

Genetic locus: PDCD5 (human) mapping to 19q13.11.

PRODUCT

Pdcd-5 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 Pdcd-5 shRNA Plasmid (h): sc-97752-SH and Pdcd-5 shRNA (h) Lentiviral Particles: sc-97752-V as alternate gene silencing products.

For independent verification of Pdcd-5 (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-97752A, sc-97752B and sc-97752C.

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

Pdcd-5 siRNA (h) is recommended for the inhibition of Pdcd-5 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Pdcd-5 gene expression knockdown using RT-PCR Primer: Pdcd-5 (h)-PR: sc-97752-PR (20 μ l). 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.