

PSIP1 siRNA (m): sc-44992

BACKGROUND

PSIP1 (PC4 and SFRS1 interacting protein 1), also known as CLL-associated antigen KW-7, PSIP2, LEDGF (lens epithelium-derived growth factor), PAIP, DFS70 (dense fine speckles 70 kDa protein) or transcriptional coactivator p75/p52, is a 530 amino acid nuclear protein that associates with chromatin throughout the cell cycle. Functioning as a transcriptional coactivator that complexes with the human immunodeficiency virus type 1 (HIV-1) integrase, PSIP1 is essential for the nuclear localization and chromosomal association of viral proteins. As the primary integrase-to-chromatin tethering factor for HIV-1, PSIP1 is responsible for the cellular trafficking of lentiviral integrases. During apoptosis, PSIP1 is cleaved at three sites by caspase-3 and caspase-7, contributing to the pathogenesis of atopic disorders.

REFERENCES

1. Ge, H., et al. 1998. Isolation of cDNAs encoding novel transcription coactivators p52 and p75 reveals an alternate regulatory mechanism of transcriptional activation. *EMBO J.* 17: 6723-6729.
2. Singh, D.P., et al. 2000. Lens epithelium-derived growth factor (LEDGF/p75) and p52 are derived from a single gene by alternative splicing. *Gene* 242: 265-273.
3. Krackhardt, A.M., et al. 2002. Identification of tumor-associated antigens in chronic lymphocytic leukemia by SEREX. *Blood* 100: 2123-2131.
4. Wu, X., et al. 2002. Caspase cleavage of the nuclear autoantigen LEDGF/p75 abrogates its pro-survival function: implications for autoimmunity in atopic disorders. *Cell Death Differ.* 9: 915-925.
5. Cherepanov, P., et al. 2003. HIV-1 integrase forms stable tetramers and associates with LEDGF/p75 protein in human cells. *J. Biol. Chem.* 278: 372-381.
6. Cherepanov, P., et al. 2004. Identification of an evolutionarily conserved domain in human lens epithelium-derived growth factor/transcriptional co-activator p75 (LEDGF/p75) that binds HIV-1 integrase. *J. Biol. Chem.* 279: 48883-48892.
7. Llano, M., et al. 2004. Lens epithelium-derived growth factor/p75 prevents proteasomal degradation of HIV-1 integrase. *J. Biol. Chem.* 279: 55570-55577.

CHROMOSOMAL LOCATION

Genetic locus: Psp1 (mouse) mapping to 4 C3.

PRODUCT

PSIP1 siRNA (m) 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 PSIP1 shRNA Plasmid (m): sc-44992-SH and PSIP1 shRNA (m) Lentiviral Particles: sc-44992-V as alternate gene silencing products.

For independent verification of PSIP1 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-44992A, sc-44992B and sc-44992C.

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

PSIP1 siRNA (m) is recommended for the inhibition of PSIP1 expression in mouse 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

PSIP1 (3F7): sc-101087 is recommended as a control antibody for monitoring of PSIP1 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 PSIP1 gene expression knockdown using RT-PCR Primer: PSIP1 (m)-PR: sc-44992-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.