SANTA CRUZ BIOTECHNOLOGY, INC.

VPS72 siRNA (h): sc-78694

BACKGROUND

The mammalian TRRAP/TIP60-containing histone acetyltransferase (HAT) complex, which exists in *Drosophila melanogaster* and mammalian cells, is a complex that is responsible for various cellular processes, including DNA repair, transcriptional activation and apoptosis. Vacuolar protein sorting-associated protein 72 homolog (VPS72), also known as VPS72 or Transcription factor-like 1, is a 364 amino acid subunit of the TRRAP/TIP60 HAT complex. VPS72 has also been identified as a subunit of a novel complex containing SNF2-related helicase SRCAP (SWI2/SNF2-related CBP activator protein). This SRCAP-containing complex is very similar to the *S. cerevisiae* SWR1 chromatin remodeling complex. The involvement of VPS72 in these complexes has suggested that VPS72 plays multiple roles in chromatin modification and remodeling in cells. VPS72 localizes to the nucleus and is phosphorylated upon DNA damage, most likely by ATM or ATR.

REFERENCES

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2. Horikawa, I., et al. 1995. Forced expression of YL-1 protein suppresses the anchorage-independent growth of Kirsten sarcoma virus-transformed NIH3T3 cells. Exp. Cell Res. 220: 11-17.
3. Park, J., et al. 2001. The ATM-related domain of TRRAP is required for histone acetyltransferase recruitment and Myc-dependent oncogenesis. Genes Dev. 15: 1619-1624.
4. Nikiforov, M.A., et al. 2002. TRRAP-dependent and TRRAP-independent transcriptional activation by Myc family oncoproteins. Mol. Cell. Biol. 22: 5054-5063.
5. Li, H., et al. 2004. HAT cofactor Trrap regulates the mitotic checkpoint by modulation of Mad1 and Mad2 expression. EMBO J. 23: 4824-4834.
6. Cai, Y., et al. 2005. The mammalian YL1 protein is a shared subunit of the TRRAP/TIP60 histone acetyltransferase and SRCAP complexes. J. Biol. Chem. 280: 13665-13670.
7. Matsuoka, S., et al. 2007. ATM and ATR substrate analysis reveals extensive protein networks responsive to DNA damage. Science 316: 1160-1166.

CHROMOSOMAL LOCATION

Genetic locus: VPS72 (human) mapping to 1q21.3.

PRODUCT

VPS72 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 VPS72 shRNA Plasmid (h): sc-78694-SH and VPS72 shRNA (h) Lentiviral Particles: sc-78694-V as alternate gene silencing products.

For independent verification of VPS72 (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-78694A, sc-78694B and sc-78694C.

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

VPS72 siRNA (h) is recommended for the inhibition of VPS72 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 VPS72 gene expression knockdown using RT-PCR Primer: VPS72 (h)-PR: sc-78694-PR (20 µl). 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.