SANTA CRUZ BIOTECHNOLOGY, INC.

ANP32C siRNA (h): sc-89166

BACKGROUND

ANP32C (acidic (leucine-rich) nuclear phosphoprotein 32 family, member C), also known as PP32R1 (phosphoprotein 32-related protein 1) or tumorigenic protein pp32r1, is a 234 amino acid protein that contains 4 leucine-rich repeats and belongs to the ANP32 family. ANP32C shares 87.7% amino acid sequence identity with ANP32A, a tumor suppressor that inhibits a variety of cancers, such as prostate and breast cancers. Although similar to ANP32A, ANP32C is tumorigenic and is expressed in activated stem cells, such as mobilized $CD34^+$ cells and cord blood $CD34^+$ cells, but not in resting bone marrow $CD34^+$ cells. ANP32C is also expressed in a variety of neoplastic cell lines, mainly in prostatic adenocarcinoma cell lines, but not in normal protastic tissue, and may also modulate the oncogenic potential of human prostate cancer. ANP32C is encoded by a gene that maps to human chromosome 4q32.3.

REFERENCES

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2. Adegbola, O. and Pasternack, G.R. 2005. Phosphorylated retinoblastoma protein complexes with pp32 and inhibits pp32-mediated apoptosis. J. Biol. Chem. 280: 15497-15502.
3. Huyton, T. and Wolberger, C. 2007. The crystal structure of the tumor suppressor protein pp32 (Anp32a): structural insights into ANP32 family of proteins. Protein Sci. 16: 1308-1315.
4. Munemasa, Y., et al. 2008. Promoter region-specific histone incorporation by the novel histone chaperone ANP32B and DNA-binding factor KLF5. Mol. Cell. Biol. 28: 1171-1181.
5. Green, M.R., et al. 2010. A new method to detect loss of heterozygosity using cohort heterozygosity comparisons. BMC Cancer 10: 195.
6. Shen, S.M., et al. 2010. Downregulation of ANP32B, a novel substrate of caspase-3, enhances caspase-3 activation and apoptosis induction in myeloid leukemic cells. Carcinogenesis 31: 419-426.
7. Kular, R.K., et al. 2010. Cpd-1 null mice display a subtle neurological phenotype. PLoS ONE 5: e12649.

CHROMOSOMAL LOCATION

Genetic locus: ANP32C (human) mapping to 4q32.3.

PRODUCT

ANP32C siRNA (h) is a pool of 2 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 ANP32C shRNA Plasmid (h): sc-89166-SH and ANP32C shRNA (h) Lentiviral Particles: sc-89166-V as alternate gene silencing products.

For independent verification of ANP32C (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-89166A and sc-89166B.

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

ANP32C siRNA (h) is recommended for the inhibition of ANP32C 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 ANP32C gene expression knockdown using RT-PCR Primer: ANP32C (h)-PR: sc-89166-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.