SANTA CRUZ BIOTECHNOLOGY, INC.

ANP32B siRNA (m): sc-62797

BACKGROUND

PHAPI2, also known as ANP32B (acidic (leucine-rich) nuclear phosphoprotein 32 family, member B), SSP29 or APRIL, is a 251 amino acid protein that localizes to the nucleus and contains four LRR (leucine-rich repeat) motifs. Expressed in placenta, heart, pancreas, lung, prostate, spleen and thymus, PHAPI2 exists as a multifunctional protein that plays an essential role in cell cycle progression and cell survival and is required for the G_1 to S phase transition. Additionally, PHAPI2 functions as an anti-apoptotic factor that inhibits the activity of caspase-3, a protein that is crucial for the successful execution of apoptotic events. Two isoforms of PHAPI2, designated Anp32b1 and Anp32b2, exist due to alternative splicing.

REFERENCES

1. Zhu, L., et al. 1997. Cloning and characterization of a new silver-stainable protein SSP29, a member of the LRR family. Biochem. Mol. Biol. Int. 42: 927-935.
2. Mencinger, M., et al. 1998. Expression analysis and chromosomal mapping of a novel human gene, APRIL, encoding an acidic protein rich in leucines. Biochim. Biophys. Acta 1395: 176-180.
3. Jiang, X., et al. 2003. Distinctive roles of PHAP proteins and prothymosin-α in a death regulatory pathway. Science 299: 223-226.
4. Bonci, D., et al. 2004. Potential role of APRIL as autocrine growth factor for megakaryocytopoiesis. Blood 104: 3169-3172.
5. Planelles, L., et al. 2004. APRIL promotes B-1 cell-associated neoplasm. Cancer Cell 6: 399-408.
6. Matilla, A. and Radrizzani, M. 2005. The Anp32 family of proteins containing leucine-rich repeats. Cerebellum 4: 7-18.
7. Ingold, K., et al. 2005. Identification of proteoglycans as the APRIL-specific binding partners. J. Exp. Med. 201: 1375-1383.
8. Fries, B., et al. 2007. Analysis of nucleocytoplasmic trafficking of the HuR ligand APRIL and its influence on CD83 expression. J. Biol. Chem. 282: 4504-4515.

CHROMOSOMAL LOCATION

Genetic locus: Anp32b (mouse) mapping to 4 B1.

PRODUCT

ANP32B 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ANP32B shRNA Plasmid (m): sc-62797-SH and ANP32B shRNA (m) Lentiviral Particles: sc-62797-V as alternate gene silencing products.

For independent verification of ANP32B (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-62797A, sc-62797B and sc-62797C.

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

ANP32B siRNA (m) is recommended for the inhibition of ANP32B 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 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 ANP32B gene expression knockdown using RT-PCR Primer: ANP32B (m)-PR: sc-62797-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.