POGZ siRNA (h): sc-88704



The Power to Question

BACKGROUND

Pogo transposable element with ZNF domain (POGZ) is a zinc finger protein containing a transposase domain at the C-terminus. Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. The majority of zinc-finger proteins contain a Krüppel-type DNA binding domain and a KRAB domain, which is thought to interact with KAP1, thereby recruiting histone modifying proteins. POGZ, a 1,410 amino acid protein that is localized to the nucleus, has been observed to interact with the transcription factor Sp1 in a yeast two-hybrid system. At least five named isoforms of POGZ have been characterized.

REFERENCES

- Pengue, G., Cannada-Bartoli, P. and Lania, L. 1993. The ZNF35 human zinc finger gene encodes a sequence-specific DNA-binding protein. FEBS Lett. 321: 233-236.
- Seki, N., Ohira, M., Nagase, T., Ishikawa, K., Miyajima, N., Nakajima, D., Nomura, N. and Ohara, O. 1997. Characterization of cDNA clones in sizefractionated cDNA libraries from human brain. DNA Res. 4: 345-349.
- Gunther, M., Laithier, M. and Brison, O. 2000. A set of proteins interacting with transcription factor Sp1 identified in a two-hybrid screening. Mol. Cell. Biochem. 210: 131-142.
- Ohira, M., Morohashi, A., Nakamura, Y., Isogai, E., Furuya, K., Hamano, S., Machida, T., Aoyama, M., Fukumura, M., Miyazaki, K., Suzuki, Y., Sugano, S., Hirato, J. and Nakagawara, A. 2003. Neuroblastoma oligo-capping cDNA project: toward the understanding of the genesis and biology of neuroblastoma. Cancer Lett. 197: 63-68.
- Shannon, M., Hamilton, A.T., Gordon, L., Branscomb, E. and Stubbs, L. 2003.
 Differential expansion of zinc-finger transcription factor loci in homologous human and mouse gene clusters. Genome Res. 13: 1097-1110.
- Beausoleil, S.A., Jedrychowski, M., Schwartz, D., Elias, J.E., Villen, J., Li, J., Cohn, M.A., Cantley, L.C. and Gygi, S.P. 2004. Large-scale characterization of HeLa cell nuclear phosphoproteins. Proc. Natl. Acad. Sci. USA 101: 12130-12135.
- Olsen, J.V., Blagoev, B., Gnad, F., Macek, B., Kumar, C., Mortensen, P. and Mann, M. 2006. Global, *in vivo*, and site-specific phosphorylation dynamics in signaling networks. Cell 127: 635-648.
- 8. Cantin, G.T., Yi, W., Lu, B., Park, S.K., Xu, T., Lee, J.D. and Yates, J.R. 2008. Combining protein-based IMAC, peptide-based IMAC, and MudPIT for efficient phosphoproteomic analysis. J. Proteome Res. 7: 1346-1351.

CHROMOSOMAL LOCATION

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

PRODUCT

POGZ 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 POGZ shRNA Plasmid (h): sc-88704-SH and POGZ shRNA (h) Lentiviral Particles: sc-88704-V as alternate gene silencing products.

For independent verification of POGZ (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-88704A, sc-88704B and sc-88704C.

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

POGZ siRNA (h) is recommended for the inhibition of POGZ 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 POGZ gene expression knockdown using RT-PCR Primer: POGZ (h)-PR: sc-88704-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.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 Fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com