

BTBD9 siRNA (h): sc-95568

BACKGROUND

BTBD9 (BTB/POZ domain-containing protein 9) is a 612 amino acid protein that contains one BTB/POZ domain and one BACK (BTB/Kelch associated) domain. The BTB/POZ domain mediates homomeric and heteromeric POZ-POZ interactions and is common to transcriptional regulators involved in chromatin modeling. In several BTB/POZ containing proteins, including Bcl-6 and the promyelocytic leukemia zinc-finger (PLZF) oncoprotein, this domain interacts with the SMRT/N-CoR-mSin3A HDAC complex and is directly involved in repressing and silencing gene transcription. When this domain is deleted, as with the oncogenic PLZF-RAR chimera of promyelocytic leukemias, this transcriptional repression is attenuated. This suggests that BTBD9 may play a role in transcription regulation. Genetic variations in the gene that encodes BTBD9 have been associated with susceptibility to restless legs syndrome type 6 (RLS6), a condition characterized by an uncontrollable urge to move the legs while resting.

REFERENCES

1. Wong, C.W. and Privalsky, M.L. 1998. Components of the SMRT corepressor complex exhibit distinctive interactions with the POZ domain oncoproteins PLZF, PLZF-RAR α and Bcl-6. *J. Biol. Chem.* 273: 27695-27702.
2. Huynh, K.D. and Bardwell, V.J. 1998. The Bcl-6 POZ domain and other POZ domains interact with the corepressors N-CoR and SMRT. *Oncogene* 17: 2473-2484.
3. Ahmad, K.F., et al. 1998. Crystal structure of the BTB domain from PLZF. *Proc. Natl. Acad. Sci. USA* 95: 12123-12128.
4. Deltour, S., et al. 1999. Recruitment of SMRT/N-CoR-mSin3A-HDAC-repressing complexes is not a general mechanism for BTB/POZ transcriptional repressors: the case of HIC-1 and γ FBP-B. *Proc. Natl. Acad. Sci. USA* 96: 14831-14836.
5. Kimura, K., et al. 2006. Diversification of transcriptional modulation: large-scale identification and characterization of putative alternative promoters of human genes. *Genome Res.* 16: 55-65.

CHROMOSOMAL LOCATION

Genetic locus: BTBD9 (human) mapping to 6p21.2.

PRODUCT

BTBD9 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 BTBD9 shRNA Plasmid (h): sc-95568-SH and BTBD9 shRNA (h) Lentiviral Particles: sc-95568-V as alternate gene silencing products.

For independent verification of BTBD9 (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-95568A, sc-95568B and sc-95568C.

PROTOCOLS

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

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

BTBD9 siRNA (h) is recommended for the inhibition of BTBD9 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 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor BTBD9 gene expression knockdown using RT-PCR Primer: BTBD9 (h)-PR: sc-95568-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.