SANTA CRUZ BIOTECHNOLOGY, INC.

BTG4 siRNA (m): sc-141781

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

B cell translocation gene proteins, also designated BTG1-4, are members of a novel anti-proliferative gene family and play a role in transcription regulation. BTG genes are considered immediate early genes whose expression is induced in response to mitogenic as well as differentiative and antiproliferative factors. They are characterized by the conserved N-terminal domain spanning 104-106 amino acids. BTG4, also designated PC3B, is a 223 amino acid protein that is highly expressed in testis and in olfactory epithelium. BTG4 expression is decreased in primary gastric cancer, but not in normal gastric tissues. BTG4 may be epigenetically silenced in the majority of gastric cancers. BTG4 is also implicated in chronic lymphocytic leukemia (CLL).

REFERENCES

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2. Rouault, J.P., et al. 1996. Identification of BTG2, an antiproliferative p53-dependent component of the DNA damage cellular response pathway. Nat. Genet. 14: 482-486.
3. Auer, R.L., et al. 2005. Identification of a potential role for POU2AF1 and BTG4 in the deletion of 11q23 in chronic lymphocytic leukemia. Genes Chromosomes Cancer 43: 1-10.
4. Toyota, M., et al. 2008. Epigenetic silencing of microRNA-34b/c and B-cell translocation gene 4 is associated with CpG island methylation in colorectal cancer. Cancer Res. 68: 4123-4132.
5. Dong, W., et al. 2009. Frequent promoter hypermethylation and transcriptional downregulation of BTG4 gene in gastric cancer. Biochem. Biophys. Res. Commun. 387: 132-138.
6. Winkler, G.S. 2010. The mammalian anti-proliferative BTG/Tob protein family. J. Cell. Physiol. 222: 66-72.

CHROMOSOMAL LOCATION

Genetic locus: Btg4 (mouse) mapping to 9 A5.3.

PRODUCT

BTG4 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 BTG4 shRNA Plasmid (m): sc-141781-SH and BTG4 shRNA (m) Lentiviral Particles: sc-141781-V as alternate gene silencing products.

For independent verification of BTG4 (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-141781A, sc-141781B and sc-141781C.

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 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

BTG4 siRNA (m) is recommended for the inhibition of BTG4 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 BTG4 gene expression knockdown using RT-PCR Primer: BTG4 (m)-PR: sc-141781-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.