SANTA CRUZ BIOTECHNOLOGY, INC.

KBTBD8 siRNA (m): sc-146354

BACKGROUND

The BTB (broad-complex, tramtrack and bric a brac) domain, also known as the POZ (poxvirus and zinc finger) domain, is an N-terminal homodimerization domain that contains multiple copies of kelch repeats and/or C_2H_2-type zinc fingers. Proteins that contain BTB domains are thought to be involved in transcriptional regulation via control of chromatin structure and function. The Kelch repeat and BTB domain-containing protein 8 (KBTBD8) contains one BTB (POZ) domain, five Kelch repeats and one BACK (BTB/Kelch associated) domain suggesting a role in transcription regulation. The gene encoding KBTBD8 maps to chromosome 3p14.1, which contains over 1,100 genes. Notably, a chemokine receptor gene cluster and a variety of human cancer related loci reside on chromosome 3. Particular regions of the chromosome 3 short arm are deleted in many types of cancer cells as well.

REFERENCES

1. Bardwell, V.J., et al. 1994. The POZ domain: a conserved protein-protein interaction motif. Genes Dev. 8: 1664-1677.
2. Zollman, S., et al. 1994. The BTB domain, found primarily in zinc finger proteins, defines an evolutionarily conserved family that includes several developmentally regulated genes in *Drosophila*. Proc. Natl. Acad. Sci. USA 91: 10717-10721.
3. Ahmad, K.F., et al. 1998. Crystal structure of the BTB domain from PLZF. Proc. Natl. Acad. Sci. USA 95: 12123-12128.
4. Braga, E.A., et al. 2003. New tumor suppressor genes in hot spots of human chromosome 3: new methods of identification. Mol. Biol. 37: 194-211.
5. Darai, E., et al. 2005. Evolutionarily plastic regions at human 3p21.3 coincide with tumor breakpoints identified by the "elimination test". Genomics 86: 1-12.
6. Rual, J.F., et al. 2005. Towards a proteome-scale map of the human protein-protein interaction network. Nature 437: 1173-1178.
7. 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.
8. Muzny, D.M., et al. 2006. The DNA sequence, annotation and analysis of human chromosome 3. Nature 440: 1194-1198.

CHROMOSOMAL LOCATION

Genetic locus: Kbtbd8 (mouse) mapping to 6 D2.

PRODUCT

KBTBD8 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 KBTBD8 shRNA Plasmid (m): sc-146354-SH and KBTBD8 shRNA (m) Lentiviral Particles: sc-146354-V as alternate gene silencing products.

For independent verification of KBTBD8 (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-146354A, sc-146354B and sc-146354C.

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

KBTBD8 siRNA (m) is recommended for the inhibition of KBTBD8 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 KBTBD8 gene expression knockdown using RT-PCR Primer: KBTBD8 (m)-PR: sc-146354-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Lührig, S., et al. 2013. The novel BTB-kelch protein, KBTBD8, is located in the Golgi apparatus and translocates to the spindle apparatus during mitosis. Cell Div. 8: 3.

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.