SANTA CRUZ BIOTECHNOLOGY, INC.

ZBED3 siRNA (h): sc-91908

BACKGROUND

The zinc finger BED domain-containing protein family (ZBED) is comprised of ZBED1, ZBED2, ZBED3, ZBED4 and ZBED5. They each contain one BED-type zinc finger domains with the exception of ZBED4, which contain four BED-type zinc finger domains. ZBED1 is thought to function as a transcription factor that regulates a number of ribosomal protein (RP) encoded genes by binding specifically to 5'-TGTCG[CT]GA[CT]A-3' DNA regions found in RP promotors. ZBED3 is an Axin-binding protein involved in Wnt/β-catenin signaling modulation. ZBED4 expression has been shown in human and mouse retinas where it is thought to act as a regulatory protein in cone photoreceptors and Müller cells. The functions of ZBED2 and ZBED5 have yet to be elucidated.

REFERENCES

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2. Nagase, T., et al. 1998. Prediction of the coding sequences of unidentified human genes. XI. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 5: 277-286.
3. Esposito, T., et al. 1999. A novel pseudoautosomal human gene encodes a putative protein similar to Ac-like transposases. Hum. Mol. Genet. 8: 61-67.
4. Ohshima, N., et al. 2003. Identification of a human homologue of the DREF transcription factor with a potential role in regulation of the Histone H1 gene. J. Biol. Chem. 278: 22928-22938.
5. Yamashita, D., et al. 2007. Human DNA replication-related element binding factor (hDREF) self-association via hATC domain is necessary for its nuclear accumulation and DNA binding. J. Biol. Chem. 282: 7563-7575.
6. Yamashita, D., et al. 2007. hDREF regulates cell proliferation and expression of ribosomal protein genes. Mol. Cell. Biol. 27: 2003-2013.
7. Saghizadeh, M., et al. 2009. ZBED4, a BED-type zinc-finger protein in the cones of the human retina. Invest. Ophthalmol. Vis. Sci. 50: 3580-3588.
8. Chen, T., et al. 2009. Identification of zinc-finger BED domain-containing 3 (ZBED3) as a novel Axin-interacting protein that activates Wnt/β-catenin signaling. J. Biol. Chem. 284: 6683-6689.

CHROMOSOMAL LOCATION

Genetic locus: ZBED3 (human) mapping to 5q13.3.

PRODUCT

ZBED3 siRNA (h) is a pool of 2 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 ZBED3 shRNA Plasmid (h): sc-91908-SH and ZBED3 shRNA (h) Lentiviral Particles: sc-91908-V as alternate gene silencing products.

For independent verification of ZBED3 (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-91908A and sc-91908B.

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

ZBED3 siRNA (h) is recommended for the inhibition of ZBED3 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 ZBED3 gene expression knockdown using RT-PCR Primer: ZBED3 (h)-PR: sc-91908-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. Fan, C., et al. 2015. ZBED3 contributes to malignant phenotype of lung cancer via regulating β-catenin and P120-catenin 1. Mol. Carcinog. 54: E138-E147.

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.