SANTA CRUZ BIOTECHNOLOGY, INC.

ZRANB2 siRNA (m): sc-155672

BACKGROUND

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. ZRANB2 (Zinc finger Ran-binding domain-containing protein 2), also known as ZNF265 (Zinc finger protein 265), ZIS, ZIS1 or ZIS2, is a 330 amino acid protein that belongs to the ZRANB2 family. Localized to the nucleus, ZRANB2 functions as a splicing factor that is responsible for alternatively splicing Tra-2β (transformer-2 β) transcripts and is thought to interfere with constitutive 5′-splice selection. ZRANB2 contains two RanBP2-type zinc fingers through which it conveys its RNA-binding activity. Two isoforms, designated ZIS-1 and ZIS-2, are expressed due to alternative splicing events. Upon DNA damage, ZIS-2 may be phosphorylated by ATM or ATR.

REFERENCES

1. Nakano, M., et al. 1998. Identification, characterization and mapping of the human ZIS (zinc-finger, splicing) gene. Gene 225: 59-65.
2. Adams, D.J., et al. 2000. Chromosome localization and characterization of the mouse and human zinc finger protein 265 gene. Cytogenet. Cell Genet. 88: 68-73.
3. Adams, D.J., et al. 2001. ZNF265—a novel spliceosomal protein able to induce alternative splicing. J. Cell Biol. 154: 25-32.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604347. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Plambeck, C.A., et al. 2003. The structure of the zinc finger domain from human splicing factor ZNF265 fold. J. Biol. Chem. 278: 22805-22811.
6. Mangs, A.H., et al. 2006. XE7: a novel splicing factor that interacts with ASF/SF2 and ZNF265. Nucleic Acids Res. 34: 4976-4986.

CHROMOSOMAL LOCATION

Genetic locus: Zranb2 (mouse) mapping to 3 H4.

PRODUCT

ZRANB2 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 ZRANB2 shRNA Plasmid (m): sc-155672-SH and ZRANB2 shRNA (m) Lentiviral Particles: sc-155672-V as alternate gene silencing products.

For independent verification of ZRANB2 (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-155672A, sc-155672B and sc-155672C.

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

ZRANB2 siRNA (m) is recommended for the inhibition of ZRANB2 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.

GENE EXPRESSION MONITORING

ZRANB2 (B-5): sc-514200 is recommended as a control antibody for monitoring of ZRANB2 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ZRANB2 gene expression knockdown using RT-PCR Primer: ZRANB2 (m)-PR: sc-155672-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.