SANTA CRUZ BIOTECHNOLOGY, INC.

BAZ2A siRNA (m): sc-141474

BACKGROUND

BAZ2A (bromodomain adjacent to zinc finger domain protein 2A) is a 1,905 amino acid protein that colocalizes with the basal RNA polymerase I transcription factor UBF in the nucleolus. The BAZ2A gene belongs to a novel bromodomain family in which the bromodomain is adjacent to a PHD finger. BAZ2A contains a bromo domain, a DDT domain, a MBD (methyl-CpG-binding) domain, a PHD-type zinc finger and four A.T hook DNA-binding domains. Expressed at moderate levels in most tissues including heart, brain, placenta, lung, skeletal muscle, kidney and pancreas, BAZ2A interacts with Dnmt1, DNM3B, HDAC1 and mSin3A. BAZ2A also interacts with TTF as a required component for recruitment of the NoRC complex to rDNA. A fusion of TEL and BAZ2A generated through a cryptic rearrangement between 12p13 and 12q13, consisting of exons 1 and 2 of TEL and a sequence from intron 1 of BAZ2A, is present in paediatric pre-B acute lymphoblastic leukaemia.

REFERENCES

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2. Strohner, R., et al. 2001. NoRC—a novel member of mammalian ISWI-containing chromatin remodeling machines. EMBO J. 20: 4892-4900.
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4. Zhou, Y., et al. 2002. The chromatin remodeling complex NoRC targets HDAC1 to the ribosomal gene promoter and represses RNA polymerase I transcription. EMBO J. 21: 4632-4640.
5. Roloff, T.C., et al. 2003. Comparative study of methyl-CpG-binding domain proteins. BMC Genomics 4: 1.
6. Németh, A., et al. 2004. The chromatin remodeling complex NoRC and TTF-I cooperate in the regulation of the mammalian rRNA genes *in vivo*. Nucleic Acids Res. 32: 4091-4099.
7. Panagopoulos, I., et al. 2006. Fusion of ETV6 with an intronic sequence of the BAZ2A gene in a paediatric pre-B acute lymphoblastic leukaemia with a cryptic chromosome 12 rearrangement. Br. J. Haematol. 133: 270-275.
8. Zhou, Y., et al. 2009. Reversible acetylation of the chromatin remodelling complex NoRC is required for non-coding RNA-dependent silencing. Nat. Cell Biol. 11: 1010-1016.

CHROMOSOMAL LOCATION

Genetic locus: Baz2a (mouse) mapping to 10 D3.

PRODUCT

BAZ2A siRNA (m) is a target-specific 19-25 nt siRNA 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 BAZ2A shRNA Plasmid (m): sc-141474-SH and BAZ2A shRNA (m) Lentiviral Particles: sc-141474-V as alternate gene silencing 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

BAZ2A siRNA (m) is recommended for the inhibition of BAZ2A 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 BAZ2A gene expression knockdown using RT-PCR Primer: BAZ2A (m)-PR: sc-141474-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.

PROTOCOLS

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