SANTA CRUZ BIOTECHNOLOGY, INC.

PB1 siRNA (m): sc-76076

BACKGROUND

PB1 (polybromo 1), also known as PBRM1 or BAF180, is a 1,689 amino acid protein that localizes to the nucleus and contains one HMG box DNA-binding domain, two BAH domains and six bromo domains. Expressed in a wide variety of tissues, PB1 functions as a component of the SWI/SNF-B (PBAF) chromatin-remodeling complex and, in conjunction with other proteins, is involved in the transcriptional activation or repression of target genes via the alternation of DNA-nucleosome topology. PB1 exists as nine alternatively spliced isoforms and, in response to DNA damage, may be phosphorylated by ATM or ATR. The gene encoding PB1 maps to human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci.

REFERENCES

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3. Wang, Z., et al. 2004. Polybromo protein BAF180 functions in mammalian cardiac chamber maturation. Genes Dev. 18: 3106-3116.
4. Yan, Z., et al. 2005. PBAF chromatin-remodeling complex requires a novel specificity subunit, BAF200, to regulate expression of selective interferon-responsive genes. Genes Dev. 19: 1662-1667.
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7. Chandrasekaran, R. and Thompson, M. 2007. Polybromo-1-bromodomains bind histone H3 at specific acetyl-lysine positions. Biochem. Biophys. Res. Commun. 355: 661-666.
8. Thompson, M. and Chandrasekaran, R. 2008. Thermodynamic analysis of acetylation-dependent Pb1 bromodomain-histone H3 interactions. Anal. Biochem. 374: 304-312.

CHROMOSOMAL LOCATION

Genetic locus: Pbrm1 (mouse) mapping to 14 B.

PRODUCT

PB1 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 PB1 shRNA Plasmid (m): sc-76076-SH and PB1 shRNA (m) Lentiviral Particles: sc-76076-V as alternate gene silencing products.

For independent verification of PB1 (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-76076A, sc-76076B and sc-76076C.

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

PB1 siRNA (m) is recommended for the inhibition of PB1 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

PB1 (D-8): sc-390095 is recommended as a control antibody for monitoring of PB1 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 PB1 gene expression knockdown using RT-PCR Primer: PB1 (m)-PR: sc-76076-PR (20 µl, 567 bp). 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.