

BAZ1A siRNA (h): sc-38623

BACKGROUND

Chromatin remodeling complexes are suggested to provide a level of regulatory control and specificity of chromatin remodeling processes. Based upon their associated ATPase, chromatin remodeling complexes are organized into four different families, SWI/SNF, ISWI, CHD and INO80. Several members of the BAZ/WAL family interact independently with hSNF2H, the human homolog of *Drosophila* ISWI, to form chromatin remodeling factors. BAZ1A (bromodomain adjacent to zinc finger domain, 1A), also known as ACF1, WALp1, hACF1 or WCRF180, is a 1,556 amino acid nuclear protein that is highly expressed in testis and consists of several conserved structures including a bromo domain, a DDT domain, a PHD-type zinc finger and a WAC motif. Belonging to the BAZ/WAL family, BAZ1A is closely related to Williams syndrome transcription factor (WSTF) and may participate in transcriptional regulation and in the formation of heterochromatin, thereby indicating a critical role in developmental control. Together with CHRAC15, CHRAC17 and hSNF2H proteins, BAZ1A forms an ISWI chromatin-remodeling complex.

REFERENCES

1. Poot, R.A., et al. 2000. HuCHRAC, a human ISWI chromatin remodelling complex contains hACF1 and two novel histone-fold proteins. *EMBO J.* 19: 3377-3387.
2. Jones, M.H., et al. 2000. A novel family of bromodomain genes. *Genomics* 63: 40-45.
3. LeRoy, G., et al. 2000. Purification and characterization of a human factor that assembles and remodels chromatin. *J. Biol. Chem.* 275: 14787-14790.
4. Bochar, D.A., et al. 2000. A family of chromatin remodeling factors related to Williams syndrome transcription factor. *Proc. Natl. Acad. Sci. USA* 97: 1038-1043.
5. Bozhenok, L., et al. 2002. WSTF-ISWI chromatin remodeling complex targets heterochromatic replication foci. *EMBO J.* 21: 2231-2241.
6. Fan, H.Y., et al. 2005. Swapping function of two chromatin remodeling complexes. *Mol. Cell* 17: 805-815.
7. He, X., et al. 2006. Human ACF1 alters the remodeling strategy of SNF2h. *J. Biol. Chem.* 281: 28636-28647.
8. Ewing, A.K., et al. 2007. Novel regulatory role for human Acf1 in transcriptional repression of vitamin D₃ receptor-regulated genes. *Mol. Endocrinol.* 21: 1791-1806.

CHROMOSOMAL LOCATION

Genetic locus: BAZ1A (human) mapping to 14q13.1.

PRODUCT

BAZ1A siRNA (h) 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see BAZ1A shRNA Plasmid (h): sc-38623-SH and BAZ1A shRNA (h) Lentiviral Particles: sc-38623-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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

BAZ1A siRNA (h) is recommended for the inhibition of BAZ1A 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 μ M in 66 μ l. 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

BAZ1A (D-5): sc-393164 is recommended as a control antibody for monitoring of BAZ1A 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 BAZ1A gene expression knockdown using RT-PCR Primer: BAZ1A (h)-PR: sc-38623-PR (20 μ l). 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.