

BAF60a siRNA (h): sc-72597

BACKGROUND

BAF60a (BRG1-associated factor 60A), also known as SMARCD1 (SWI/SNF related, matrix associated, Actin dependent regulator of chromatin, subfamily δ , member 1), Rsc6p or CRACD1, is a 476 amino acid protein that localizes to the nucleus and contains one SWIB domain. Expressed ubiquitously with notable expression in liver, brain, muscle, lung, kidney, pancreas and placenta, BAF60a functions as a component of the BAF complex and, in conjunction with a variety of other proteins, plays an essential role in chromatin remodeling. In addition, BAF60a influences vitamin D-mediated transcriptional activity and is thought to provide a link between the vitamin D receptor (VDR) and SWI/SNF chromatin remodeling complexes. Multiple isoforms of BAF60a exist due to alternative splicing events.

REFERENCES

1. Wang, W., et al. 1996. Diversity and specialization of mammalian SWI/SNF complexes. *Genes Dev.* 10: 2117-2130.
2. Ring, H.Z., et al. 1998. Five SWI/SNF-related, matrix-associated, Actin-dependent regulator of chromatin (SMARC) genes are dispersed in the human genome. *Genomics* 51: 140-143.
3. Phelan, M.L., et al. 1999. Reconstitution of a core chromatin remodeling complex from SWI/SNF subunits. *Mol. Cell* 3: 247-253.
4. Online Mendelian Inheritance in Man, OMIM™. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 601735. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: SMARCD1 (human) mapping to 12q13.12.

PRODUCT

BAF60a siRNA (h) 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see BAF60a shRNA Plasmid (h): sc-72597-SH and BAF60a shRNA (h) Lentiviral Particles: sc-72597-V as alternate gene silencing products.

For independent verification of BAF60a (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-72597A, sc-72597B and sc-72597C.

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

BAF60a siRNA (h) is recommended for the inhibition of BAF60a 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

BAF60a (A-11): sc-514400 is recommended as a control antibody for monitoring of BAF60a 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 BAF60a gene expression knockdown using RT-PCR Primer: BAF60a (h)-PR: sc-72597-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Kuleape, J.A., et al. 2022. DNA damage triggers the nuclear accumulation of RASSF6 tumor suppressor protein via CDK9 and BAF53 to regulate p53 target gene transcription. *Mol. Cell. Biol.* 42: e0031021.

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.