



SAS10 siRNA (h): sc-89202

BACKGROUND

SAS10 (something about silencing protein 10), also known as UTP3 or CRLZ1 (charged amino acid-rich leucine zipper 1), is a small subunit (SSU) processome component. The SSU processome is a complex involved in ribosome biogenesis and is required for pre-18S rRNA maturation. SAS10 localizes to the nucleus and also plays a role in forming the structure of silenced chromatin. SAS10 is the human homolog of the *S. cerevisiae* Sas10 protein. In *S. cerevisiae*, the overexpression of Sas10 disrupts gene silencing. This suggests another role of SAS10 in gene silencing. In addition, SAS10 is believed to be involved in the development of the brain. Upon DNA damage, SAS10 is phosphorylated by ATM or ATR.

REFERENCES

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3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611614. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Bernstein, K.A., et al. 2004. The small-subunit processome is a ribosome assembly intermediate. *Eukaryotic Cell* 3: 1619-1626.
5. Bleichert, F., et al. 2006. The PINc domain protein Utp24, a putative nuclease, is required for the early cleavage steps in 18S rRNA maturation. *Proc. Natl. Acad. Sci. USA* 103: 9464-9469.
6. Lim, J.H., et al. 2006. Stage-specific expression of two neighboring Crlz1 and IgJ genes during B cell development is regulated by their chromatin accessibility and histone acetylation. *J. Immunol.* 177: 5420-5429.
7. Kim, J.Y., et al. 2006. The HSS3/4 enhancer of Crlz1-IgJ locus is another target of EBF in the pre-B cell stage of B cell development. *Immunol. Lett.* 107: 63-70.

CHROMOSOMAL LOCATION

Genetic locus: UTP3 (human) mapping to 4q13.3.

PRODUCT

SAS10 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 SAS10 shRNA Plasmid (h): sc-89202-SH and SAS10 shRNA (h) Lentiviral Particles: sc-89202-V as alternate gene silencing products.

For independent verification of SAS10 (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-89202A, sc-89202B and sc-89202C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

SAS10 siRNA (h) is recommended for the inhibition of SAS10 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

SAS10 (2950C2a): sc-81639 is recommended as a control antibody for monitoring of SAS10 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).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SAS10 gene expression knockdown using RT-PCR Primer: SAS10 (h)-PR: sc-89202-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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