



Stra13 siRNA (m): sc-153908

BACKGROUND

Stra13 (stimulated by retinoic acid 13), also known as MHF2, FAAP10, FANCM-interacting histone fold protein 2 or CENP-X (centromere protein X), is an 81 amino acid protein that functions as a DNA-binding component of the FA complex for genome maintenance and DNA damage repair. Localizing to chromatin in nucleus and centromere, Stra13 plays a role in muscle integrity by protecting muscle cells from oxidative damage, and Stra13 overexpression has been shown to produce oxidative damage resistance in mice. Stra13 undergoes alternative splicing events to produce three isoforms which are encoded by a gene that maps to human chromosome 17 and mouse chromosome 11. Stra13 plays a role in assembly of the outer kinetochore and is considered a target for myoepithelial cells and metastatic tumors.

REFERENCES

1. Ivanova, A.V., et al. 2001. Regulation of STRA13 by the von Hippel-Lindau tumor suppressor protein, hypoxia, and the UBC9/ubiquitin proteasome degradation pathway. *J. Biol. Chem.* 276: 15306-15315.
2. Ivanova, A.V., et al. 2005. Association, mutual stabilization, and transcriptional activity of the STRA13 and MSP58 proteins. *Cell. Mol. Life Sci.* 62: 471-484.
3. Ivanova, A., et al. 2005. STRA13 expression and subcellular localisation in normal and tumour tissues: implications for use as a diagnostic and differentiation marker. *J. Med. Genet.* 42: 565-576.
4. Thin, T.H., et al. 2007. Stra13 is induced by genotoxic stress and regulates ionizing-radiation-induced apoptosis. *EMBO Rep.* 8: 401-407.
5. Vercherat, C., et al. 2009. Stra13 regulates oxidative stress mediated skeletal muscle degeneration. *Hum. Mol. Genet.* 18: 4304-4316.
6. Amano, M., et al. 2009. The CENP-S complex is essential for the stable assembly of outer kinetochore structure. *J. Cell Biol.* 186: 173-182.
7. Ban, H.J., et al. 2010. Identification of type 2 diabetes-associated combination of SNPs using support vector machine. *BMC Genet.* 11: 26.

CHROMOSOMAL LOCATION

Genetic locus: Stra13 (mouse) mapping to 11 E2.

PRODUCT

Stra13 siRNA (m) is a pool of 2 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 Stra13 shRNA Plasmid (m): sc-153908-SH and Stra13 shRNA (m) Lentiviral Particles: sc-153908-V as alternate gene silencing products.

For independent verification of Stra13 (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-153908A and sc-153908B.

PROTOCOLS

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

Stra13 siRNA (m) is recommended for the inhibition of Stra13 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 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Stra13 gene expression knockdown using RT-PCR Primer: Stra13 (m)-PR: sc-153908-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.