



SLAIN1 siRNA (m): sc-153482

BACKGROUND

SLAIN1 (SLAIN motif family, member 1) is a 561 amino acid member of the SLAIN motif-containing family and is expressed in embryonic stem cells, as well as in lung, brain and testis, where it exists as two alternatively spliced isoforms. The gene encoding SLAIN1 maps to human chromosome 13, which houses over 400 genes, such as BRCA2 and RB1, and comprises nearly 4% of the human genome. As with most chromosomes, polysomy of part or all of chromosome 13 is deleterious to development and decreases the odds of survival. Trisomy 13, also known as Patau syndrome, is deadly and the few who survive past one year suffer from permanent neurologic defects, difficulty eating and vulnerability to serious respiratory infections.

REFERENCES

1. Dunham, A., et al. 2004. The DNA sequence and analysis of human chromosome 13. *Nature* 428: 522-528.
2. Hirst, C.E., et al. 2006. Transcriptional profiling of mouse and human ES cells identifies SLAIN1, a novel stem cell gene. *Dev. Biol.* 293: 90-103.
4. Bugge, M., et al. 2007. Non-disjunction of chromosome 13. *Hum. Mol. Genet.* 16: 2004-2010.
5. Hassler, M., et al. 2007. Crystal structure of the retinoblastoma protein N domain provides insight into tumor suppression, ligand interaction and holoprotein architecture. *Mol. Cell* 28: 371-385.
6. Hsu, H.F., et al. 2007. Variable expressivity in Patau syndrome is not all related to Trisomy 13 mosaicism. *Am. J. Med. Genet. A* 143A: 1739-1748.
7. Hall, H.E., et al. 2007. The origin of Trisomy 13. *Am. J. Med. Genet. A* 143A: 2242-2248.
8. Thorslund, T., et al. 2007. BRCA2: a universal recombinase regulator. *Oncogene* 26: 7720-7730.
9. Persson, B., et al. 2009. The SDR (short-chain dehydrogenase/reductase and related enzymes) nomenclature initiative. *Chem. Biol. Interact.* 178: 94-98.

CHROMOSOMAL LOCATION

Genetic locus: Slain1 (mouse) mapping to 14 E2.3.

PRODUCT

SLAIN1 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SLAIN1 shRNA Plasmid (m): sc-153482-SH and SLAIN1 shRNA (m) Lentiviral Particles: sc-153482-V as alternate gene silencing products.

For independent verification of SLAIN1 (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-153482A, sc-153482B and sc-153482C.

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

SLAIN1 siRNA (m) is recommended for the inhibition of SLAIN1 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 SLAIN1 gene expression knockdown using RT-PCR Primer: SLAIN1 (m)-PR: sc-153482-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.