

p49/STRAP shRNA (m) Lentiviral Particles: sc-151964-V

BACKGROUND

p49/STRAP, also known as SRFBP1 (serum response factor binding protein 1), p49, Rlb1, BUD22 or STRAP, is a 429 amino acid protein that localizes to the perinuclear region of the cytoplasm and is expressed abundantly in heart and skeletal muscle. Interacting with SRF (serum response factor), p49/STRAP is thought to be involved in the biosynthesis and processing of adipose cells and may also regulate the transcriptional activation of cardiac genes during the aging process. The gene encoding p49/STRAP maps to human chromosome 5, which contains 181 million base pairs and comprises nearly 6% of the human genome. Deletion of the p arm of chromosome 5 leads to Cri du chat syndrome, while deletion of the q arm or of chromosome 5 altogether is common in therapy-related acute myelogenous leukemias and myelodysplastic syndrome.

REFERENCES

1. Miano, J.M. 2003. Serum response factor: toggling between disparate programs of gene expression. *J. Mol. Cell. Cardiol.* 35: 577-593.
2. Zhang, X., Azhar, G., Zhong, Y. and Wei, J.Y. 2004. Identification of a novel serum response factor cofactor in cardiac gene regulation. *J. Biol. Chem.* 279: 55626-55632.
3. Lisinski, I., Matsumoto, H., Yver, D.R., Schürmann, A., Cushman, S.W. and Al-Hasani, H. 2006. Identification and characterization of p49/STRAP as a novel Glut4-binding protein. *Biochem. Biophys. Res. Commun.* 344: 1179-1185.
4. Rensen, S.S., Niessen, P.M., Long, X., Doevedans, P.A., Miano, J.M. and van Eys, G.J. 2006. Contribution of serum response factor and myocardin to transcriptional regulation of smoothelins. *Cardiovasc. Res.* 70: 136-145.
5. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610479. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Zhang, X., Azhar, G., Helms, S., Zhong, Y. and Wei, J.Y. 2008. Identification of a subunit of NADH-dehydrogenase as a p49/STRAP-binding protein. *BMC Cell Biol.* 9: 8.

CHROMOSOMAL LOCATION

Genetic locus: Srfbp1 (mouse) mapping to 18 D1.

PRODUCT

p49/STRAP shRNA (m) Lentiviral Particles are concentrated, transduction-ready viral particles containing a target-specific construct that encodes a 19-25 nt (plus hairpin) shRNA designed to knock down gene expression. Each vial contains 200 μ l frozen stock containing 1.0×10^6 infectious units of virus (IFU) in Dulbecco's Modified Eagle's Medium with 25 mM HEPES pH 7.3. Suitable for 10-20 transductions. Also see p49/STRAP siRNA (m): sc-151964 and p49/STRAP shRNA Plasmid (m): sc-151964-SH as alternate gene silencing products.

STORAGE

Store lentiviral particles at -80° C. Stable for at least one year from the date of shipment. Once thawed, particles can be stored at 4° C for up to one week. Avoid repeated freeze thaw cycles.

APPLICATIONS

p49/STRAP shRNA (m) Lentiviral Particles is recommended for the inhibition of p49/STRAP expression in mouse cells.

SUPPORT REAGENTS

Control shRNA Lentiviral Particles: sc-108080. Available as 200 μ l frozen viral stock containing 1.0×10^6 infectious units of virus (IFU); contains an shRNA construct encoding a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor p49/STRAP gene expression knockdown using RT-PCR Primer: p49/STRAP (m)-PR: sc-151964-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

BIOSAFETY

Lentiviral particles can be employed in standard Biosafety Level 2 tissue culture facilities (and should be treated with the same level of caution as with any other potentially infectious reagent). Lentiviral particles are replication-incompetent and are designed to self-inactivate after transduction and integration of shRNA constructs into genomic DNA of target cells.

RESEARCH USE

The purchase of this product conveys to the buyer the nontransferable right to use the purchased amount of the product and all replicates and derivatives for research purposes conducted by the buyer in his laboratory only (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party, or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.

PROTOCOLS

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