

SNIP1 siRNA (m): sc-61582

BACKGROUND

Members of the transforming growth factor- β (TGF- β) superfamily play critical roles in controlling cell growth and differentiation. Effects of TGF- β family ligands are mediated by Smad proteins. The Smad nuclear interacting protein (SNIP1) contains a forkhead-associated (FHA) domain and acts as a nuclear inhibitor of CBP/p300. SNIP1 potently inhibits the activity of NF κ B, which binds the C/H1 domain of CBP/p300, by competing for the binding site. SNIP1 is also thought to induce expression of cyclin D1 to promote cellular proliferation. SNIP1 is ubiquitously expressed with high expression in heart and skeletal muscle.

REFERENCES

1. Kim, R.H., et al. 2000. A novel smad nuclear interacting protein, SNIP1, suppresses p300-dependent TGF- β signal transduction. *Genes Dev.* 14: 1605-1616.
2. Kim, R.H., et al. 2001. SNIP1 inhibits NF κ B signaling by competing for its binding to the C/H1 domain of CBP/p300 transcriptional co-activators. *J. Biol. Chem.* 276: 46297-46304.
3. Lin, Y., et al. 2002. A novel link between the proteasome pathway and the signal transduction pathway of the bone morphogenetic proteins (BMPs). *BMC Cell Biol.* 3: 15.
4. Wang, T. 2003. The 26S proteasome system in the signaling pathways of TGF- β superfamily. *Front. Biosci.* 8: d1109-d1127.
5. Roche, K.C., et al. 2004. The FHA domain protein SNIP1 is a regulator of the cell cycle and cyclin D1 expression. *Oncogene* 23: 8185-8195.
6. Mouillet, J.F., et al. 2004. p300 regulates the synergy of steroidogenic factor-1 and early growth response-1 in activating luteinizing hormone- β subunit gene. *J. Biol. Chem.* 279: 7832-7839.

CHROMOSOMAL LOCATION

Genetic locus: Snip1 (mouse) mapping to 4 D2.2.

PRODUCT

SNIP1 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 SNIP1 shRNA Plasmid (m): sc-61582-SH and SNIP1 shRNA (m) Lentiviral Particles: sc-61582-V as alternate gene silencing products.

For independent verification of SNIP1 (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-61582A, sc-61582B and sc-61582C.

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.

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

SNIP1 siRNA (m) is recommended for the inhibition of SNIP1 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 SNIP1 gene expression knockdown using RT-PCR Primer: SNIP1 (m)-PR: sc-61582-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.