

Suppressin siRNA (h): sc-76613

BACKGROUND

Suppressin, also known as DEAF1 (deformed epidermal autoregulatory factor 1), SPN, NUDR (nuclear DEAF-1-related transcriptional regulator), or ZMYND5 (zinc finger MYND domain-containing protein 5), is a transcription factor required for embryonic development. Suppressin contains one SAND domain and one C-terminal MYND-type zinc finger. It interacts with LMO4 and CLIM-2, suggesting that it plays a role mediating cell fate and embryonic pattern formation. Suppressin is expressed in a variety of tissues and localizes to the nucleus. Several isoforms exist due to alternative splicing and, depending on the isoform, Suppressin is secreted in some cell types. Secreted Suppressin can function to inhibit cell proliferation, arresting cells in the G₀ or G₁ phase. Mutations in the gene encoding Suppressin may result in a growth advantage leading to the development and progression of neoplasia. This suggests that Suppressin is a potential target for cancer therapy.

REFERENCES

1. Huggenvik, J.L., et al. 1998. Characterization of a nuclear deformed epidermal autoregulatory factor-1 (DEAF-1)-related (NUDR) transcriptional regulator protein. *Mol. Endocrinol.* 12: 1619-1639.
2. Michelson, R.J., et al. 1999. Nuclear DEAF-1-related (NUDR) protein contains a novel DNA binding domain and represses transcription of the heterogeneous nuclear ribonucleoprotein A2/B1 promoter. *J. Biol. Chem.* 274: 30510-30519.
3. Bottomley, M.J., et al. 2001. The SAND domain structure defines a novel DNA-binding fold in transcriptional regulation. *Nat. Struct. Biol.* 8: 626-633.
4. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602635. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Lemonde, S., et al. 2003. Impaired repression at a 5-hydroxytryptamine 1A receptor gene polymorphism associated with major depression and suicide. *J. Neurosci.* 23: 8788-8799.

CHROMOSOMAL LOCATION

Genetic locus: DEAF1 (human) mapping to 11p15.5.

PRODUCT

Suppressin 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 Suppressin shRNA Plasmid (h): sc-76613-SH and Suppressin shRNA (h) Lentiviral Particles: sc-76613-V as alternate gene silencing products.

For independent verification of Suppressin (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-76613A, sc-76613B and sc-76613C.

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

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

Suppressin (E-5): sc-514180 is recommended as a control antibody for monitoring of Suppressin 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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Suppressin gene expression knockdown using RT-PCR Primer: Suppressin (h)-PR: sc-76613-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.