

α -taxilin siRNA (h): sc-39644

BACKGROUND

α -taxilin is a novel binding partner of the syntaxin family which is implicated in intracellular vesicle trafficking. Through its C-terminal coiled-coil region, α -taxilin interacts with the nascent polypeptide-associated complex (NAC), which acts as a transcriptional coactivator. Although α -taxilin binds to both the α and β NAC subunits, the main interaction is through α NAC. Co-expression of α -taxilin with overexpressed α NAC eliminates the nuclear distribution of α NAC, originally distributed throughout the cytosol and nucleus. β - and γ -taxilins, additional members of the taxilin family, bind to α NAC and affect its nuclear distribution, suggesting that the taxilin family is involved not only in the translational process through its interaction with NAC but also in the transcriptional process through its interaction with α NAC alone.

REFERENCES

1. Nogami, S., et al. 2003. Interaction of taxilin with syntaxin which does not form the SNARE complex. *Biochem. Biophys. Res. Commun.* 311: 797-802.
2. Nogami, S., et al. 2003. Taxilin; a novel syntaxin-binding protein that is involved in Ca^{2+} -dependent exocytosis in neuroendocrine cells. *Genes Cells* 8: 17-28.
3. Nogami, S., et al. 2004. Identification and characterization of taxilin isoforms. *Biochem. Biophys. Res. Commun.* 319: 936-943.
4. Yoshida, K., et al. 2005. Interaction of the taxilin family with the nascent polypeptide-associated complex that is involved in the transcriptional and translational processes. *Genes Cells* 10: 465-476.

CHROMOSOMAL LOCATION

Genetic locus: TXLNA (human) mapping to 1p35.1.

PRODUCT

α -taxilin 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 μM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see α -taxilin shRNA Plasmid (h): sc-39644-SH and α -taxilin shRNA (h) Lentiviral Particles: sc-39644-V as alternate gene silencing products.

For independent verification of α -taxilin (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-39644A, sc-39644B and sc-39644C.

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 μl of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μl of RNase-free water makes a 10 μM solution in a 10 μM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

α -taxilin siRNA (h) is recommended for the inhibition of α -taxilin 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 μM in 66 μl . 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

α -taxilin (E-2): sc-271783 is recommended as a control antibody for monitoring of α -taxilin 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 MarkerTM 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 α -taxilin gene expression knockdown using RT-PCR Primer: α -taxilin (h)-PR: sc-39644-PR (20 μl). Annealing temperature for the primers should be $55-60^{\circ}\text{C}$ and the extension temperature should be $68-72^{\circ}\text{C}$.

SELECT PRODUCT CITATIONS

1. Hoffmann, J., et al. 2013. Identification of α -taxilin as an essential factor for the life cycle of hepatitis B virus. *J. Hepatol.* 59: 934-941.
2. Elgner, F., et al. 2016. Characterization of α -taxilin as a novel factor controlling the release of hepatitis C virus. *Biochem. J.* 473: 145-155.
3. Habeger, V., et al. 2020. Regulation of the transferrin receptor recycling in hepatitis C virus-replicating cells. *Front. Cell Dev. Biol.* 8: 44.

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.