SANTA CRUZ BIOTECHNOLOGY, INC.

ATXN7L3 siRNA (h): sc-106847

BACKGROUND

ATXN7L3 (ataxin-7-like protein 3) is a 347 amino acid transcription protein that belongs to the SGF11 family. ATXN7L3 localizes to nucleus and contains one SCA7 domain and one SGF11-type zinc finger. The SGF11-type zinc finger of ATXN7L3 mediates the interaction with USP22 and ENY2. ATXN7L3 is a component of the transcription regulatory histone acetylation (HAT) complex SAGA, which is a multiprotein complex that activates transcription by remodeling chromatin and mediating histone acetylation and deubiquitination. Within the SAGA complex, ATXN7L3 contributes to a subcomplex that specifically deubiquitinates both histones H2A and H2B. The ATXN7L3 gene exists as two alternatively spliced isoforms, is conserved in chimpanzee, cannine, bovine, rat, zebrafish, fruit fly and mosquito, and maps to human chromosome 17q21.2.

REFERENCES

1. Strausberg, R.L., et al. 2002. Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences. Proc. Natl. Acad. Sci. USA 99: 16899-16903.
2. Helmlinger, D., et al. 2004. Ataxin-7 is a subunit of GCN5 histone acetyltransferase-containing complexes. Hum. Mol. Genet. 13: 1257-1265.
3. Zhao, Y., et al. 2008. A TFTC/STAGA module mediates histone H2A and H2B deubiquitination, coactivates nuclear receptors, and counteracts heterochromatin silencing. Mol. Cell 29: 92-101.
4. Rodríguez-Navarro, S. 2009. Insights into SAGA function during gene expression. EMBO Rep. 10: 843-850.
5. Weake, V.M., et al. 2009. A novel histone fold domain-containing protein that replaces TAF6 in *Drosophila* SAGA is required for SAGA-dependent gene expression. Genes Dev. 23: 2818-2823.
6. Bonnet, J., et al. 2010. The structural plasticity of SCA7 domains defines their differential nucleosome-binding properties. EMBO Rep. 11: 612-618.

CHROMOSOMAL LOCATION

Genetic locus: ATXN7L3 (human) mapping to 17q21.2.

PRODUCT

ATXN7L3 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 ATXN7L3 shRNA Plasmid (h): sc-106847-SH and ATXN7L3 shRNA (h) Lentiviral Particles: sc-106847-V as alternate gene silencing products.

For independent verification of ATXN7L3 (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-106847A, sc-106847B and sc-106847C.

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 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

ATXN7L3 siRNA (h) is recommended for the inhibition of ATXN7L3 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ATXN7L3 gene expression knockdown using RT-PCR Primer: ATXN7L3 (h)-PR: sc-106847-PR (20 µl). 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.