

TADA3L siRNA (h): sc-78466

BACKGROUND

TADA3L (transcriptional adapter 3-like), also known as ADA3, is a 432 amino acid nuclear protein that functions as a component of the PCAF (p300/CBP-associated factor) complex and belongs to the NGG1 family. The PCAF complex functions to acetylate histones in a nucleosomal context and is thought to have similar function to the yeast SAGA complex. TADA3L also functions as a component of the ATAC complex, which is a complex that has active acetyltransferase on histones H3 and H4. TADA3L is alternatively spliced into two isoforms and is encoded by a gene that maps to human chromosome 3. Chromosome 3 houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci. Key tumor suppressing genes on chromosome 3 include those that encode the apoptosis mediator RASSF1, the cell migration regulator HYAL1 and the angiogenesis suppressor SEMA3B. Marfan syndrome, porphyria, von Hippel-Lindau syndrome, osteogenesis imperfecta and Charcot-Marie-Tooth disease are a few of the numerous genetic diseases associated with chromosome 3.

REFERENCES

1. De Jonghe, P., et al. 1997. Mutilating neuropathic ulcerations in a chromosome 3q13-q22 linked Charcot-Marie-Tooth disease type 2B family. *J. Neurol. Neurosurg. Psychiatr.* 62: 570-573.
2. Maho, A., et al. 1999. Mapping of the CXCR1, CX3CR1, CCBP2 and CCR9 genes to the CCR cluster within the 3p21.3 region of the human genome. *Cytogenet. Cell Genet.* 87: 265-268.
3. Robinson, P.N. and Godfrey, M. 2000. The molecular genetics of Marfan syndrome and related microfibrilopathies. *J. Med. Genet.* 37: 9-25.

CHROMOSOMAL LOCATION

Genetic locus: TADA3 (human) mapping to 3p25.3.

PRODUCT

TADA3L 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 TADA3L shRNA Plasmid (h): sc-78466-SH and TADA3L shRNA (h) Lentiviral Particles: sc-78466-V as alternate gene silencing products.

For independent verification of TADA3L (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-78466A, sc-78466B and sc-78466C.

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

TADA3L siRNA (h) is recommended for the inhibition of TADA3L 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

TADA3L (D-10): sc-166118 is recommended as a control antibody for monitoring of TADA3L 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 TADA3L gene expression knockdown using RT-PCR Primer: TADA3L (h)-PR: sc-78466-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Chen, J., et al. 2010. Pygo2 associates with MLL2 histone methyltransferase and GCN5 histone acetyltransferase complexes to augment Wnt target gene expression and breast cancer stem-like cell expansion. *Mol. Cell. Biol.* 30: 5621-5635.
2. Mohibi, S., et al. 2015. Alteration/deficiency in activation 3 (ADA3) protein, a cell cycle regulator, associates with the centromere through CENP-B and regulates chromosome segregation. *J. Biol. Chem.* 290: 28299-28310.
3. Srivastava, S., et al. 2017. Epidermal growth factor receptor activation promotes ADA3 acetylation through the Akt-p300 pathway. *Cell Cycle* 16: 1515-1525.

RESEARCH USE

For research use only, not for use in diagnostic procedures.