

# TAZ siRNA (m): sc-38569

## BACKGROUND

The transcriptional co-activator with PDZ-binding motif (TAZ) is a 14-3-3 binding molecule. The highly conserved and ubiquitously expressed 14-3-3 proteins regulate differentiation, cell cycle progression and apoptosis by binding intracellular phosphoproteins involved in signal transduction. TAZ may link events at the plasma membrane and cytoskeleton to nuclear transcription in a manner that can be regulated by 14-3-3. TAZ shares homology with the WW domain of Yes-associated protein (YAP) and functions as a transcriptional co-activator by binding to the PPXY motif present on transcription factors. TAZ recognizes immunoreactive protein bands in lysates from MDCK, NIH-3T3 and 293T cells. In addition, COS7, Hep G2, CHO and HeLa cells express endogenous TAZ. 14-3-3 binding requires TAZ phosphorylation on a single Serine 89 residue, resulting in the inhibition of TAZ transcriptional co-activation through 14-3-3-mediated nuclear export.

## REFERENCES

1. Kanai, F., et al. 2000. TAZ: a novel transcriptional co-activator regulated by interactions with 14-3-3 and PDZ domain proteins. *EMBO J.* 19: 6778-6791.
2. Fu, H., et al. 2000. 14-3-3 proteins: structure, function, and regulation. *Annu. Rev. Pharmacol. Toxicol.* 40: 617-647.
3. Garner, C., et al. 2000. PDZ domains in synapse assembly and signaling. *Trends Cell Biol.* 7: 274-280.

## CHROMOSOMAL LOCATION

Genetic locus: Wwtr1 (mouse) mapping to 3 D.

## PRODUCT

TAZ 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see TAZ shRNA Plasmid (m): sc-38569-SH and TAZ shRNA (m) Lentiviral Particles: sc-38569-V as alternate gene silencing products.

For independent verification of TAZ (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-38569A, sc-38569B and sc-38569C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

TAZ siRNA (m) is recommended for the inhibition of TAZ 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  $\mu$ M in 66  $\mu$ 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

TAZ (D-8): sc-518026 is recommended as a control antibody for monitoring of TAZ 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 $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor TAZ gene expression knockdown using RT-PCR Primer: TAZ (m)-PR: sc-38569-PR (20  $\mu$ l, 578 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS

1. Lee, M.J., et al. 2014. YAP and TAZ regulate skin wound healing. *J. Invest. Dermatol.* 134: 518-525.
2. Yin, X., et al. 2019. Hexokinase 2 couples glycolysis with the profibrotic actions of TGF- $\beta$ . *Sci. Signal.* 12: eaax4067.
3. Kang, J.H., et al. 2020. Transforming growth factor  $\beta$  induces fibroblasts to express and release the immunomodulatory protein PD-L1 into extracellular vesicles. *FASEB J.* 34: 2213-2226.
4. Lee, E.J., et al. 2020. TAZ/Wnt- $\beta$ -catenin/c-Myc axis regulates cystogenesis in polycystic kidney disease. *Proc. Natl. Acad. Sci. USA* 117: 29001-29012.
5. Jun, J.H., et al. 2022. Reduced expression of TAZ inhibits primary cilium formation in renal glomeruli. *Exp. Mol. Med.* 54: 169-179.

## RESEARCH USE

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