

TAB182 siRNA (m): sc-155970

BACKGROUND

Tankyrase-1 and -2 are closely related poly(ADP-ribose) polymerases that colocalize and use an ankyrin-repeat domain to bind diverse proteins, including TRF-1 (telomere-repeat-binding factor 1), IRAP (Insulin-responsive aminopeptidase), and TAB182. Tankyrase-1 and Tankyrase-2 mediate overlapping functions, both at telomeres and in vesicular compartments. TAB182 is a Tankyrase binding protein which not only binds to the ANK repeat domain of Tankyrase-1 and Tankyrase-2, but also serves as an acceptor of poly(ADP-ribosylation) by Tankyrase-1. TAB182 is expressed in multiple tissues such as the kidney, pancreas, heart, lung, liver, and ovary, as well as the brain and peripheral blood leukocytes, to a lesser extent. The TAB182 protein localizes to nucleus and to the cytoplasm, where it colocalizes with the cortical actin network. Two basic regions at the N-terminal and C-terminal domains of TAB182 and a large internal acidic region comprise TAB182. The C-terminal domain also contains 2 possible nuclear localization signals.

REFERENCES

1. Cook, B.D., et al. 2002. Role for the related poly(ADP-ribose) polymerases Tankyrase-1 and -2 at human telomeres. *Mol. Cell. Biol.* 22: 332-342.
2. Sbdio, J.I. and Chi, N.W. 2002. Identification of a Tankyrase-binding motif shared by IRAP, TAB182, and human TRF1 but not mouse TRF1. NuMA contains this RXXPDG motif and is a novel Tankyrase partner. *J. Biol. Chem.* 277: 31887-31892.
3. Seimiya, H. and Smith, S. 2002. The telomeric poly(ADP-ribose) polymerase, Tankyrase-1, contains multiple binding sites for telomeric repeat binding factor 1 (TRF1) and a novel acceptor, 182 kDa Tankyrase-binding protein (TAB182). *J. Biol. Chem.* 277: 14116-14126.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607104. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Kuimov, A.N. and Terekhov, S.M. 2003. Soluble Tankyrase located in cytosol of human embryonic kidney cell line 293. *Biochemistry* 68: 260-268.

CHROMOSOMAL LOCATION

Genetic locus: Tnks1bp1 (mouse) mapping to 2 D.

PRODUCT

TAB182 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see TAB182 shRNA Plasmid (m): sc-155970-SH and TAB182 shRNA (m) Lentiviral Particles: sc-155970-V as alternate gene silencing products.

For independent verification of TAB182 (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-155970A, sc-155970B and sc-155970C.

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

TAB182 siRNA (m) is recommended for the inhibition of TAB182 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 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

TAB182 (D-5): sc-514517 is recommended as a control antibody for monitoring of TAB182 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 TAB182 gene expression knockdown using RT-PCR Primer: TAB182 (m)-PR: sc-155970-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.