

TRPC4AP siRNA (m): sc-154692

BACKGROUND

TRPC4AP (transient receptor potential cation channel, subfamily C, member 4 associated protein), also known as TRUSS or TRRP4AP, is a 797 amino acid protein that is expressed in a variety of tissues, with highest expression in liver, heart, testis and brain. Thought to function as a scaffolding protein, TRPC4AP interacts with TNF-R1 and may both link TNF-R1 to the IKK signalosome complex, and participate in the activation of NFκB p50, an event that occurs in response to TNF-R1 ligation. TRPC4AP exists as multiple alternatively spliced isoforms that are encoded by a gene which maps to human chromosome 20. Comprising approximately 2% of the human genome, chromosome 20 contains nearly 63 million bases that encode over 600 genes, some of which are associated with Creutzfeldt-Jakob disease, amyotrophic lateral sclerosis, spinal muscular atrophy, ring chromosome 20 epilepsy syndrome and Alagille syndrome.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608430. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Soond, S.M., et al. 2003. TRUSS, a novel tumor necrosis factor receptor 1 scaffolding protein that mediates activation of the transcription factor NFκB. *Mol. Cell. Biol.* 23: 8334-8344.
3. Ville, D., et al. 2006. Early pattern of epilepsy in the ring chromosome 20 syndrome. *Epilepsia* 47: 543-549.
4. Tsang, H.T., et al. 2006. A systematic analysis of human CHMP protein interactions: additional MIT domain-containing proteins bind to multiple components of the human ESCRT III complex. *Genomics* 88: 333-346.
5. Poduslo, S.E., et al. 2008. Genome screen of late-onset Alzheimer's extended pedigrees identifies TRPC4AP by haplotype analysis. *Am. J. Med. Genet. B Neuropsychiatr. Genet.* 150B: 50-55.
6. Poduslo, S.E., et al. 2008. The frequency of the TRPC4AP haplotype in Alzheimer's patients. *Neurosci. Lett.* 450: 344-346.

CHROMOSOMAL LOCATION

Genetic locus: *Trpc4ap* (mouse) mapping to 2 H1.

PRODUCT

TRPC4AP 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 μM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see TRPC4AP shRNA Plasmid (m): sc-154692-SH and TRPC4AP shRNA (m) Lentiviral Particles: sc-154692-V as alternate gene silencing products.

For independent verification of TRPC4AP (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-154692A, sc-154692B and sc-154692C.

RESEARCH USE

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

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

TRPC4AP siRNA (m) is recommended for the inhibition of TRPC4AP 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 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

TRPC4AP (B-10): sc-515186 is recommended as a control antibody for monitoring of TRPC4AP 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 TRPC4AP gene expression knockdown using RT-PCR Primer: TRPC4AP (m)-PR: sc-154692-PR (20 μl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.