SANTA CRUZ BIOTECHNOLOGY, INC.

TRAPPC4 siRNA (h): sc-96374

BACKGROUND

TRAPPC4 (trafficking protein particle complex 4), also known as SBDN, TRS23, PTD009, CGI-104, HSPC172 (hematopoietic stem/progenitor cell protein 172) or SYNBINDIN, is a postsynaptic protein belonging to the TRAPPC4 subfamily of the TRAPP small subunits family of proteins. Expressed in neurons and localizing to the Golgi apparatus, TRAPPC4 is believed to be involved in vesicular transport from the endoplasmic reticulum (ER) to the Golgi, functioning as a component of the multisubunit transport protein particle (TRAPP) complex. Similar to other proteins involved in vesicular transport or synaptic function, TRAPPC4 contains a nonclassical PDZ domain, a TRAPPC1-like domain and a C-terminus that is similar to a short segment of RyR. Via its nonclassical PDZ domain, TRAPPC4 binds to the C-terminal EFYA motif of Syndecan-2, suggesting that TRAPPC4 may play an important role in dendritic spine morphogenesis through membrane-trafficking.

REFERENCES

1. Ethell, I.M., et al. 2000. Synbindin, A novel syndecan-2-binding protein in neuronal dendritic spines. J. Cell Biol. 151: 53-68.
2. Lai, C.H., et al. 2000. Identification of novel human genes evolutionarily conserved in *Caenorhabditis elegans* by comparative proteomics. Genome Res. 10: 703-713.
3. Simons, M. and Horowitz, A. 2001. Syndecan-4-mediated signalling. Cell. Signal. 13: 855-862.
4. Woods, A. 2001. Syndecans: transmembrane modulators of adhesion and matrix assembly. J. Clin. Invest. 107: 935-941.

CHROMOSOMAL LOCATION

Genetic locus: TRAPPC4 (human) mapping to 11q23.3.

PRODUCT

TRAPPC4 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 TRAPPC4 shRNA Plasmid (h): sc-96374-SH and TRAPPC4 shRNA (h) Lentiviral Particles: sc-96374-V as alternate gene silencing products.

For independent verification of TRAPPC4 (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-96374A, sc-96374B and sc-96374C.

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

TRAPPC4 siRNA (h) is recommended for the inhibition of TRAPPC4 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.

GENE EXPRESSION MONITORING

TRAPPC4 (C-7): sc-390551 is recommended as a control antibody for monitoring of TRAPPC4 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 TRAPPC4 gene expression knockdown using RT-PCR Primer: TRAPPC4 (h)-PR: sc-96374-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Romeo, M.A., et al. 2023. Acetylation increases expression, interaction with TRAPPC4 and surface localization of PD-L1. Discov. Oncol. 14: 152.

RESEARCH USE

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

PROTOCOLS

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