

syntenin-1 siRNA (h): sc-42164

BACKGROUND

Syntenin-1 (also known as syntenin, syndecan binding protein, melanoma differentiation-associated protein 9 or proTGF- α cytoplasmic domain-interacting protein 18) is a protein that binds to the cytoplasmic domains of the syndecans in yeast two-hybrid screens and other assays. Syntenin-1 contains a tandem repeat of PDZ domains that reacts with the FYA (Phe-Tyr-Ala) carboxy-terminal amino acid sequence of the syndecans. It may function as an adaptor that couples syndecans to cytoskeletal proteins or cytosolic downstream signal-effectors. Syntenin-1 colocalizes and interacts specifically with immature, intracellular forms of proTGF α . It is a human γ interferon responsive protein. Syntenin-1 contains PSD-95/Discs large/zO-1 (PDZ) domains and associates with the cytoplasmic tail of the IL-5R α . It directly associates with the transcription factor Sox-4. The PDZ proteins PICK1, GRIP, ABP and syntenin-1 bind multiple glutamate receptor subtypes.

REFERENCES

1. Grootjans, J.J., et al. 1997. Syntenin, a PDZ protein that binds syndecan cytoplasmic domains. *Proc. Natl. Acad. Sci. USA* 94: 13683-13688.
2. Lin, J.J., et al. 1998. Melanoma differentiation associated gene-9, MDA-9, is a human γ interferon responsive gene. *Gene* 207: 105-110.
3. Fernandez-Larrea, J., et al. 1999. A role for a PDZ protein in the early secretory pathway for the targeting of proTGF α to the cell surface. *Mol. Cell* 3: 423-433.
4. Geijsen, N., et al. 2001. Cytokine-specific transcriptional regulation through an IL-5R α interacting protein. *Science* 293: 1136-1138.

CHROMOSOMAL LOCATION

Genetic locus: SDCBP (human) mapping to 8q12.1.

PRODUCT

syntenin-1 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 syntenin-1 shRNA Plasmid (h): sc-42164-SH and syntenin-1 shRNA (h) Lentiviral Particles: sc-42164-V as alternate gene silencing products.

For independent verification of syntenin-1 (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-42164A, sc-42164B and sc-42164C.

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

syntenin-1 siRNA (h) is recommended for the inhibition of syntenin-1 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

syntenin-1 (C-3): sc-515538 is recommended as a control antibody for monitoring of syntenin-1 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 syntenin-1 gene expression knockdown using RT-PCR Primer: syntenin-1 (h)-PR: sc-42164-PR (20 μ l, 441 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Kim, W.Y., et al. 2014. Syntenin increases the invasiveness of small cell lung cancer cells by activating p38, AKT, focal adhesion kinase and SP1. *Exp. Mol. Med.* 46: e90.
2. Cui, L., et al. 2016. Syntenin-1 is a promoter and prognostic marker of head and neck squamous cell carcinoma invasion and metastasis. *Oncotarget* 7: 82634-82647.
3. Kim, S.B., et al. 2017. Caspase-8 controls the secretion of inflammatory lysyl-tRNA synthetase in exosomes from cancer cells. *J. Cell Biol.* 216: 2201-2216.

RESEARCH USE

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