

adseverin siRNA (m): sc-72456

BACKGROUND

Adseverin (ADSV), also known as scinderin (SCIN), is a 715 amino acid protein belonging to the Villin/Gelsolin family. Adseverin is a Ca^{2+} -dependent Actin filament-severing protein localized to the cytoskeleton. Adseverin is believed to have a regulatory role in exocytosis by altering the organization of the microfilament network underneath the plasma membrane. *In vitro*, adseverin has barbed end capping and nucleating activities in the presence of Ca^{2+} . Adseverin contains six Gelsolin-like repeats and is expressed as two isoforms produced by alternative splicing.

REFERENCES

- Rodríguez Del Castillo, A., et al. 1992. Ca^{2+} and pH determine the interaction of chromaffin cell scinderin with phosphatidylserine and phosphatidylinositol 4,5-bisphosphate and its cellular distribution during nicotinic-receptor stimulation and protein kinase C activation. *J. Cell Biol.* 119: 797-810.
- Rodríguez Del Castillo, A., et al. 1992. Human platelets contain scinderin, a Ca^{2+} -dependent Actin filament-severing protein. *Thromb. Haemost.* 67: 248-251.
- Lueck, A., et al. 1998. The Actin-binding proteins adseverin and Gelsolin are both highly expressed but differentially localized in kidney and intestine. *J. Cell Sci.* 111: 3633-3643.
- Zunino, R., et al. 2001. Expression of scinderin in megakaryoblastic leukemia cells induces differentiation, maturation, and apoptosis with release of plateletlike particles and inhibits proliferation and tumorigenesis. *Blood* 98: 2210-2219.

CHROMOSOMAL LOCATION

Genetic locus: Scin (mouse) mapping to 12 B1.

PRODUCT

adseverin 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 adseverin shRNA Plasmid (m): sc-72456-SH and adseverin shRNA (m) Lentiviral Particles: sc-72456-V as alternate gene silencing products.

For independent verification of adseverin (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-72456A, sc-72456B and sc-72456C.

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

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

adseverin (C-2): sc-376136 is recommended as a control antibody for monitoring of adseverin 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 adseverin gene expression knockdown using RT-PCR Primer: adseverin (m)-PR: sc-72456-PR (20 μl). Annealing temperature for the primers should be $55-60^{\circ}\text{C}$ and the extension temperature should be $68-72^{\circ}\text{C}$.

SELECT PRODUCT CITATIONS

- Song, M.K., et al. 2015. Adseverin mediates RANKL-induced osteoclastogenesis by regulating NFATc1. *Exp. Mol. Med.* 47: e199.

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.