SANTA CRUZ BIOTECHNOLOGY, INC.

Supervillin siRNA (h): sc-61624

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Members of the Gelsolin superfamily play a role in Actin filament remodeling as well as several other cellular processes, including cell motility, control of apoptosis and regulation of phagocytosis. Supervillin is tightly associated with both Actin filaments and plasma membrane and may participate in cell growth, adhesion and motility. Supervillin is ubiquitously expressed. A non-muscle-specific form of Supervillin can activate androgen receptor activity; the muscle-specific isoform of Supervillin, designated Archvillin, contributes to myogenic membrane structures and differentiation.

REFERENCES

1. Pestonjamasp, K.N., Pope, R.K., Wulfkuhle, J.D. and Luna, E.J. 1997. Supervillin (p205): A novel membrane-associated, F-Actin-binding protein in the villin/gelsolin superfamily. J. Cell Biol. 139: 1255-1269.
2. Pope, R.K., Pestonjamasp, K.N., Smith, K.P., Wulfkuhle, J.D., Strassel, C.P., Lawrence, J.B. and Luna, E.J. 1998. Cloning, characterization, and chromosomal localization of human Supervillin (SVIL). Genomics 52: 342-351.
3. Ting, H.J., Yeh, S., Nishimura, K. and Chang, C. 2002. Supervillin associates with androgen receptor and modulates its transcriptional activity. Proc. Natl. Acad. Sci. USA 99: 661-666.
4. Oh, S.W., Pope, R.K., Smith, K.P., Crowley, J.L., Nebl, T., Lawrence, J.B. and Luna, E.J. 2003. Archvillin, a muscle-specific isoform of Supervillin, is an early expressed component of the costameric membrane skeleton. J. Cell Sci. 116: 2261-2275.
5. Silacci, P., Mazzolai, L., Gauci, C., Stergiopulos, N., Yin, H.L. and Hayoz, D. 2004. Gelsolin superfamily proteins: key regulators of cellular functions. Cell. Mol. Life Sci. 61: 2614-2623.
6. Archer, S.K., Behm, C.A., Claudianos, C. and Campbell, H.D. 2004. The Flightless I protein and the gelsolin family in nuclear hormone receptor-mediated signalling. Biochem. Soc. Trans. 32: 940-942.

CHROMOSOMAL LOCATION

Genetic locus: SVIL (human) mapping to 10p11.23.

PRODUCT

Supervillin 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 Supervillin shRNA Plasmid (h): sc-61624-SH and Supervillin shRNA (h) Lentiviral Particles: sc-61624-V as alternate gene silencing products.

For independent verification of Supervillin (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-61624A, sc-61624B and sc-61624C.

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 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

Supervillin siRNA (h) is recommended for the inhibition of Supervillin 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

Supervillin (B8C1): sc-53556 is recommended as a control antibody for monitoring of Supervillin 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 Supervillin gene expression knockdown using RT-PCR Primer: Supervillin (h)-PR: sc-61624-PR (20 µl, 428 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Liu, H.P., et al. 2011. Association of Supervillin with KIR2DL1 regulates the inhibitory signaling of natural killer cells. Cell. Signal. 23: 487-496.

RESEARCH USE

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