

# ARMS siRNA (h): sc-44511

## BACKGROUND

Ankyrin repeat-rich membrane-spanning protein (ARMS), also designated kinase D-interacting substance 220 or Kidins220, is a highly conserved, 1,715 amino acid protein containing multiple domains, including 4 putative transmembrane domains and several ankyrin repeats. ARMS is expressed in regions rich in neurotrophin (Trk) and ephrin (Eph) receptors, such as the brain and neuroendocrine cells (where it concentrates at the tip of neurites) and in plastic areas of the adult brain. It is also detected in peripheral blood immature dendritic cells and PC12 cells. ARMS functions as a substrate for protein kinase D and is a downstream target for both Trk and Eph receptors. It is a highly conserved protein, which suggests it has an evolutionary conserved role. The gene encoding for the protein maps to chromosome 2p25.1.

## REFERENCES

1. Iglesias, T., et al. 2000. Identification and cloning of Kidins220, a novel neuronal substrate of protein kinase D. *J. Biol. Chem.* 275: 40048-40056.
2. Kong, H., et al. 2001. An evolutionarily conserved transmembrane protein that is a novel downstream target of neurotrophin and ephrin receptors. *J. Neurosci.* 21: 176-185.
3. Arevalo, J.C., et al. 2004. A unique pathway for sustained neurotrophin signaling through an ankyrin-rich membrane-spanning protein. *EMBO J.* 23: 2358-2368.
4. Riol-Blanco, L., et al. 2004. The neuronal protein Kidins220 localizes in a raft compartment at the leading edge of motile immature dendritic cells. *Eur. J. Immunol.* 34: 108-118.
5. Luo, S., et al. 2005.  $\alpha$ -Syntrophin regulates ARMS localization at the neuromuscular junction and enhances EphA4 signaling in an ARMS-dependent manner. *J. Cell Biol.* 169: 813-824.
6. <http://harvester.embl.de/harvester/Q9UL/Q9ULH0.htm>

## CHROMOSOMAL LOCATION

Genetic locus: KIDINS220 (human) mapping to 2p25.1.

## PRODUCT

ARMS 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ARMS shRNA Plasmid (h): sc-44511-SH and ARMS shRNA (h) Lentiviral Particles: sc-44511-V as alternate gene silencing products.

For independent verification of ARMS (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-44511A, sc-44511B and sc-44511C.

## PROTOCOLS

See our web site at [www.scbt.com](http://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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

ARMS siRNA (h) is recommended for the inhibition of ARMS 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  $\mu$ M in 66  $\mu$ 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

ARMS (26): sc-136462 is recommended as a control antibody for monitoring of ARMS 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 $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ARMS gene expression knockdown using RT-PCR Primer: ARMS (h)-PR: sc-44511-PR (20  $\mu$ l, 595 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## RESEARCH USE

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