

# ARMER siRNA (m): sc-61995

## BACKGROUND

ARMER (apoptotic regulator in the membrane of the endoplasmic reticulum), also known as ADP-ribosylation-like factor 6-interacting protein 1 (ARL6IP1 or AIP1), is a multipass membrane protein that belongs to the Ras superfamily. It is expressed in brain, thymus, lung, bone marrow and, to a lesser extent, in spleen, kidney and liver. ARMER is not found in the heart and is found predominantly in early myeloid progenitor cells localizing to the intracytoplasmic membranes. It interacts with ARL6, inhibits caspase-9 activity by inhibiting proteolysis of downstream substrates (including LEHD-AFC, Vimentin and caspase-3) and is downregulated during myeloid differentiation. ARMER may play a role in membrane trafficking, protein transport or cell signaling during hematopoietic maturation.

## REFERENCES

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3. Pettersson, M., Bessonova, M., Gu, H.F., Groop, L.C. and Jönsson, J.I. 2000. Characterization, chromosomal localization, and expression during hematopoietic differentiation of the gene encoding ARL6IP, ADP-ribosylation-like factor-6 interacting protein (ARL6). *Genomics* 68: 351-354.
4. Lui, H.M., Chen, J., Wang, L. and Naumovski, L. 2003. ARMER, apoptotic regulator in the membrane of the endoplasmic reticulum, a novel inhibitor of apoptosis. *Mol. Cancer Res.* 1: 508-518.
5. Schalkwyk, L.C., Fernandes, C., Nash, M.W., Kurrikoff, K., Vasar, E. and Köks, S. 2007. Interpretation of knockout experiments: the congenic footprint. *Genes Brain Behav.* 6: 299-303.

## CHROMOSOMAL LOCATION

Genetic locus: ARL6IP1 (mouse) mapping to 7 F2.

## PRODUCT

ARMER 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ARMER shRNA Plasmid (m): sc-61995-SH and ARMER shRNA (m) Lentiviral Particles: sc-61995-V as alternate gene silencing products.

For independent verification of ARMER (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-61995A, sc-61995B and sc-61995C.

## RESEARCH USE

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

## 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

ARMER siRNA (m) is recommended for the inhibition of ARMER 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  $\mu$ 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

ARMER (B-5): sc-514476 is recommended as a control antibody for monitoring of ARMER 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™ Molecular Weight Standards: sc-2035, UltraCruz® 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® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ARMER gene expression knockdown using RT-PCR Primer: ARMER (m)-PR: sc-61995-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.