SANTA CRUZ BIOTECHNOLOGY, INC.

# p20-ARC siRNA (m): sc-155923

## BACKGROUND

The Arp2/3 (Actin-related protein 2/3) complex consists of seven subunits, all of which are Actin-related proteins. The complex is involved in the control of Actin polymerization and in mediating the formation of branched Actin networks. p20-ARC, also known as ARPC4 (Actin-related protein 2/3 complex subunit 4) or ARC20 (Arp2/3 complex 20 kDa subunit), is a 168 amino acid Actin-binding component of Arp2/3. Localized to the cytoplasm and cytoskeleton, p20-ARC can, unlike other Actin-related proteins, interact with several of the Arp2/3 subunits. This suggests that p20-ARC acts as a hub in the complex and may play a key role in Arp2/3 complex formation. Two isoforms of p20-ARC exist due to alternative splicing events.

## REFERENCES


1. Welch, M.D., et al. 1997. The human Arp2/3 complex is composed of evolutionarily conserved subunits and is localized to cellular regions of dynamic Actin filament assembly. J. Cell Biol. 138: 375-384.
2. Zhao, X., et al. 2001. Interactions among subunits of human Arp2/3 complex: p20-ARC as the hub. Biochem. Biophys. Res. Commun. 280: 513-517.
3. Robinson, R.C., et al. 2001. Crystal structure of Arp2/3 complex. Science 294: 1679-1684.
4. Millard, T.H., et al. 2002. Identification and characterisation of a novel human isoform of Arp2/3 complex subunit p16-ARC/ARPC5. Cell Motil. Cytoskeleton 54: 81-90.
5. Terasaki, A.G., et al. 2002. Characterization of Arp2/3 complex in chicken tissues. Cell Struct. Funct. 27: 383-391.
6. Beltzner, C.C. and Pollard, T.D. 2004. Identification of functionally important residues of Arp2/3 complex by analysis of homology models from diverse species. J. Mol. Biol. 336: 551-565.
7. Perroud, P.F. and Quatrano, R.S. 2006. The role of ARPC4 in tip growth and alignment of the polar axis in filaments of Physcomitrella patens. Cell Motil. Cytoskeleton 63: 162-171.
8. Beltzner, C.C. and Pollard, T.D. 2008. Pathway of Actin filament branch formation by Arp2/3 complex. J. Biol. Chem. 283: 7135-7144.


## CHROMOSOMAL LOCATION

Genetic locus: Arpc4 (mouse) mapping to 6 E3.

## PRODUCT

p20-ARC siRNA (m) is a pool of 2 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 p20-ARC shRNA Plasmid (m): sc-155923-SH and p20-ARC shRNA (m) Lentiviral Particles: sc-155923-V as alternate gene silencing products.

For independent verification of p20-ARC (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-155923A and sc-155923B.

## 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

p20-ARC siRNA (m) is recommended for the inhibition of p20-ARC 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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor p20-ARC gene expression knockdown using RT-PCR Primer: p20-ARC (m)-PR: sc-155923-PR (20 µl). 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.

## PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.