

p20-ARC siRNA (h): sc-62737

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

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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.

CHROMOSOMAL LOCATION

Genetic locus: ARPC4 (human) mapping to 3p25.3.

PRODUCT

p20-ARC 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see p20-ARC shRNA Plasmid (h): sc-62737-SH and p20-ARC shRNA (h) Lentiviral Particles: sc-62737-V as alternate gene silencing products.

For independent verification of p20-ARC (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-62737A, sc-62737B and sc-62737C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

p20-ARC siRNA (h) is recommended for the inhibition of p20-ARC 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 μ M in 66 μ 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor p20-ARC gene expression knockdown using RT-PCR Primer: p20-ARC (h)-PR: sc-62737-PR (20 μ l). 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.