SANTA CRUZ BIOTECHNOLOGY, INC.

ArgBP2a siRNA (h): sc-40337

BACKGROUND

Arg and c-Abl represent the mammalian members of the Abelson family of non-receptor protein-tyrosine kinases They interact with the Arg/Abl binding proteins (ArgBPs) via SH3 domains present in the carboxy-terminus of the ArgBPs. One member of the Arg/Abl binding protein family, ArgBP2, is expressed in epithelial and cardiac muscle cells. The subcellular localization of ArgBP2 suggests that it functions as an adapter protein in the assembly of signaling complexes in stress fibers and that it is a potential link between Abl family kinases and the Actin cytoskeleton. The human ArgBP2 gene, which maps to chromosome 4, encodes multiple transcripts that yield different isoforms of ArgBP2. Isoforms ArgBP2a and ArgBP2b differ at the 5' end but have the same carboxy-terminal sequence, containing three SH3 domains. Another member of the ArgBP family, nArgBP2, which is specifically expressed in neural tissue, has the carboxy terminal SH3 domains characteristic of Arg/Abl binding proteins, as well as a sorbin homology domain near the N-terminus and a zinc finger motif in the middle region of the protein. nArgBP2 interacts with the proline-rich region of SAPAP via its third SH3 domain. In rat brain, nArgBP2 co-localizes with SAPAP at the synapses of the cerebellum.

REFERENCES

1. Kruh, G.D., et al.1990. The complete coding sequence of arg defines the Abelson subfamily of cytoplasmic tyrosine kinases. Proc. Natl. Acad. Sci. USA 87: 5802-5806.
2. Wang, B., et al. 1997. ArgBP2, a multiple Src homology 3 domain-containing, Arg/Abl-interacting protein, is phosphorylated in v-Abl-transformed cells and localized in stress fibers and cardiocyte Z-disks. J. Biol. Chem. 272: 17542-17550.
3. Kawabe, H., et al. 1999. nArgBP2, a novel neural member of ponsin/ArgBP2/vinexin family that interacts with synapse-associated protein 90/postsynaptic density-95-associated protein (SAPAP). J. Biol. Chem. 274: 30914-30918.
4. Hirao, K., et al. 2000. Association of synapse-associated protein 90/postsynaptic density-95-associated protein (SAPAP) with neurofilaments. Genes Cells 5: 203-210.
5. Locus Link (LocusID: 8470). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: ARGBP2 (human) mapping to 4q35.1.

PRODUCT

ArgBP2a 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 ArgBP2a shRNA Plasmid (h): sc-40337-SH and ArgBP2a shRNA (h) Lentiviral Particles: sc-40337-V as alternate gene silencing products.

For independent verification of ArgBP2a (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-40337A, sc-40337B and sc-40337C.

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

ArgBP2a siRNA (h) is recommended for the inhibition of ArgBP2a 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ArgBP2a gene expression knockdown using RT-PCR Primer: ArgBP2a (h)-PR: sc-40337-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.