SANTA CRUZ BIOTECHNOLOGY, INC.

CLIC2 siRNA (h): sc-60402

BACKGROUND

Chloride channels (CLCs) regulate cellular traffic of chloride ions, a critical component of all living cells. CLCs are involved in membrane potential stabilization, signal transduction, cell volume regulation and organic solute transport. The putative 247 amino acid protein chloride intracellular channel 2 (CLIC2), also designated XAP121, shares 60% identity with the CLIC1 protein and demonstrates expression in only fetal liver and adult skeletal muscle tissues. The CLIC2 gene maps to chromosome Xq28 and contains six exons. Because a direct association exists between a number of human chloride channel genes and a range of hereditary diseases, CLIC2 is a potential candidate for one of the many diseases linked to Xq28. The hereditary form of incontinentia pigmenti (IP2), for example, is a rare disorder characterized by abnormalities of the tissues and organs derived from the ectoderm and neuroectoderm that has been linked to Xq28.

REFERENCES

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4. Rønnov-Jessen, L., Villadsen, R., Edwards, J.C. and Petersen, O.W. 2002. Differential expression of a chloride intracellular channel gene, CLIC4, in transforming growth factor-β1-mediated conversion of fibroblasts to myofibroblasts. Am. J. Pathol. 161: 471-480.
5. Fan, L., Yu, W. and Zhu, X. 2003. Interaction of Sedlin with chloride intracellular channel proteins. FEBS Lett. 540: 77-80.
6. Board, P.G., Coggan, M., Watson, S., Gage, P.W. and Dulhunty, A.F. 2004. CLIC2 modulates cardiac ryanodine receptor Ca^{2+} release channels. Int. J. Biochem. Cell Biol. 36: 1599-1612.

CHROMOSOMAL LOCATION

Genetic locus: CLIC2 (human) mapping to Xq28.

PRODUCT

CLIC2 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 CLIC2 shRNA Plasmid (h): sc-60402-SH and CLIC2 shRNA (h) Lentiviral Particles: sc-60402-V as alternate gene silencing products.

For independent verification of CLIC2 (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-60402A, sc-60402B and sc-60402C.

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

CLIC2 siRNA (h) is recommended for the inhibition of CLIC2 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 CLIC2 gene expression knockdown using RT-PCR Primer: CLIC2 (h)-PR: sc-60402-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.