SANTA CRUZ BIOTECHNOLOGY, INC.

ANKRA siRNA (m): sc-72496

BACKGROUND

ANKRA (ankyrin repeat family A), also known as ANKRA2 (ankyrin repeat family A protein 2) or RFX-B-like 2, is an abundantly expressed, 313 amino acid protein found in a wide variety of tissues. It contains an N-terminal helix-loop-helix domain and three ankyrin repeats. ANKRA is known to interact with MaxiKα, megalin and the histone deacetylases HDAC4 and HDAC5. Typically, ANKRA is evenly distributed throughout the cell, however, in the presence of HDACs, ANKRA specifically localizes to the nucleus. In the nucleus, ANKRA appears to be important for transcriptional repression, functioning as a corepressor and binding to the C-terminal sequence of AHRR. ANKRA can become redistributed in the cell in response to CaMK signaling.

REFERENCES

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3. Krawczyk, M., Masternak, K., Zufferey, M., Barras, E. and Reith, W. 2005. New functions of the major histocompatibility complex class II-specific transcription factor RFXANK revealed by a high-resolution mutagenesis study. Mol. Cell. Biol. 25: 8607-8618.
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5. Lim, H.H. and Park, C.S. 2005. Identification and functional characterization of ankyrin-repeat family protein ANKRA as a protein interacting with BK(Ca) channel. Mol. Biol. Cell 16: 1013-1025.
6. Long, A.B. and Boss, J.M. 2005. Evolutionary conservation and characterization of the bare lymphocyte syndrome transcription factor RFX-B and its paralogue ANKRA2. Immunogenetics 56: 788-797.
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8. Oshima, M., Mimura, J., Yamamoto, M. and Fujii-Kuriyama, Y. 2007. Molecular mechanism of transcriptional repression of AhR repressor involving ANKRA2, HDAC4, and HDAC5. Biochem. Biophys. Res. Commun. 364: 276-282.

CHROMOSOMAL LOCATION

Genetic locus: Ankra2 (mouse) mapping to 13 D1.

PROTOCOLS

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

PRODUCT

ANKRA 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ANKRA shRNA Plasmid (m): sc-72496-SH and ANKRA shRNA (m) Lentiviral Particles: sc-72496-V as alternate gene silencing products.

For independent verification of ANKRA (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-72496A, sc-72496B and sc-72496C.

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

ANKRA siRNA (m) is recommended for the inhibition of ANKRA 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 ANKRA gene expression knockdown using RT-PCR Primer: ANKRA (m)-PR: sc-72496-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.