SANTA CRUZ BIOTECHNOLOGY, INC.

ANKK1 siRNA (h): sc-96702

BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including cell division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/threonine (Ser/Thr) protein kinases. ANKK1 (ankyrin repeat and kinase domain containing 1), also known as PKK2 or SGK288, is a 765 amino acid protein that belongs to the Ser/Thr protein kinase family and contains 12 ANK repeats and one protein kinase domain. Highly expressed in brain tissue and present in lower amounts in placenta and spinal cord, ANKK1 functions to catalyze the ATP-dependent phosphorylation of target proteins and is thought to play a role in alcohol and nicotine dependence. The gene encoding ANKK1 maps to human chromosome 11, which houses over 1,400 genes and comprises nearly 4% of the human genome.

REFERENCES

1. Bairoch, A. and Claverie, J.M. 1988. Sequence patterns in protein kinases. Nature 331: 22.
2. Hanks, S.K., Quinn, A.M. and Hunter, T. 1988. The protein kinase family: conserved features and deduced phylogeny of the catalytic domains. Science 241: 42-52.
3. Hanks, S.K. and Quinn, A.M. 1991. Protein kinase catalytic domain sequence database: identification of conserved features of primary structure and classification of family members. Methods Enzymol. 200: 38-62.
4. Manning, G., Whyte, D.B., Martinez, R., Hunter, T. and Sudarsanam, S. 2002. The protein kinase complement of the human genome. Science 298: 1912-1934.
5. Neville, M.J., Johnstone, E.C. and Walton, R.T. 2004. Identification and characterization of ANKK1: a novel kinase gene closely linked to DRD2 on chromosome band 11q23.1. Hum. Mutat. 23: 540-545.

CHROMOSOMAL LOCATION

Genetic locus: ANKK1 (human) mapping to 11q23.2.

PRODUCT

ANKK1 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 ANKK1 shRNA Plasmid (h): sc-96702-SH and ANKK1 shRNA (h) Lentiviral Particles: sc-96702-V as alternate gene silencing products.

For independent verification of ANKK1 (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-96702A, sc-96702B and sc-96702C.

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 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

ANKK1 siRNA (h) is recommended for the inhibition of ANKK1 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 ANKK1 gene expression knockdown using RT-PCR Primer: ANKK1 (h)-PR: sc-96702-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.