SANTA CRUZ BIOTECHNOLOGY, INC.

CKIP-1 siRNA (m): sc-60390

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The Power to Question

BACKGROUND

Casein kinase II-interacting protein 1 (CKIP-1), also designated Pleckstrin homology domain containing family O member 1 (PLEKHO1), is a 409 amino acid protein with an N-terminal Pleckstrin homology domain and a putative C-terminal Jun leucine zipper interactive domain. CKIP-1 is expressed at the highest levels in skeletal muscle and heart, intermediately in placenta, lung and brain and at the weakest levels in pancreas, liver and kidney. CKIP-1 localizes to the plasma membrane of transfected COS-7 cells and also to the plasma membrane and the nucleus in human osteosarcoma cells. It interacts with the N-terminus of CSNK2A1 and with full length CSNK2A1, but not with CSNK2A2 or CSNK2B.

REFERENCES

1. Bosc, D.G., et al. 2000. Identification and characterization of CKIP-1, a novel Pleckstrin homology domain-containing protein that interacts with protein kinase CK2. J. Biol. Chem. 275: 14295-14306.
2. Olsten, M.E., et al. 2004. The Pleckstrin homology domain of CK2 interacting protein-1 is required for interactions and recruitment of protein kinase CK2 to the plasma membrane. J. Biol. Chem. 279: 42114-42127.
3. Barrios-Rodiles, M., et al. 2005. High-throughput mapping of a dynamic signaling network in mammalian cells. Science 307: 1621-1625.
4. Canton, D.A., et al. 2005. The Pleckstrin homology domain-containing protein CKIP-1 is involved in regulation of cell morphology and the Actin cytoskeleton and interaction with actin capping protein. Mol. Cell. Biol. 25: 3519-3534.
5. Zhang, L., et al. 2005. Role for the Pleckstrin homology domain-containing protein CKIP-1 in AP-1 regulation and apoptosis. EMBO J. 24: 766-778.
6. Lim, J., et al. 2006. A protein-protein interaction network for human inherited ataxias and disorders of Purkinje cell degeneration. Cell 125: 801-814.

CHROMOSOMAL LOCATION

Genetic locus: Plekho1 (mouse) mapping to 3 F2.1.

PRODUCT

CKIP-1 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 CKIP-1 shRNA Plasmid (m): sc-60390-SH and CKIP-1 shRNA (m) Lentiviral Particles: sc-60390-V as alternate gene silencing products.

For independent verification of CKIP-1 (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-60390A, sc-60390B and sc-60390C.

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

CKIP-1 siRNA (m) is recommended for the inhibition of CKIP-1 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.

GENE EXPRESSION MONITORING

CKIP-1 (A-12): sc-376355 is recommended as a control antibody for monitoring of CKIP-1 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CKIP-1 gene expression knockdown using RT-PCR Primer: CKIP-1 (m)-PR: sc-60390-PR (20 µl, 470 bp). 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.