SANTA CRUZ BIOTECHNOLOGY, INC.

ICK siRNA (m): sc-60862

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The Power to Question

BACKGROUND

Intestinal cell kinase (ICK), also designated MRK, LCK2, KIAA0936 and MGC46090, is a nuclear Cdc2-related kinase. ICK shares nearly identical N-terminal catalytic domains with male germ cell-associated kinase (MAK), however the C-terminal noncatalytic domain of intestinal cell kinase diverges from that of MAK. The catalytic domain of ICK is also related to mitogen-activated protein kinases (MAPKs) and harbors a corresponding TDY motif, the dual phosphorylation of which activates ICK. The phosphorylation of Tyr 159 in the TDY motif requires ICK autokinase activity, but confers only basal kinase activity; full activation of the protein requires additional phosphorylation of Thr 157 in the TDY motif.

REFERENCES

1. Coudronnière, N., et al. 1998. The Ick protein tyrosine kinase is not involved in antibody-mediated CD4 (CDR3-loop) signal transduction that inhibits HIV-1 transcription. Eur. J. Immunol. 28: 1445-1457.
2. Togawa, K., et al. 2000. Intestinal cell kinase (ICK) localizes to the crypt region and requires a dual phosphorylation site found in map kinases. J. Cell. Physiol. 183: 129-139.
3. Sorice, M., et al. 2001. Association between GM3 and CD4-Ick complex in human peripheral blood lymphocytes. Glycoconj. J. 17: 247-252.
4. Fu, Z., et al. 2005. Activation of a nuclear Cdc2-related kinase within a mitogen-activated protein kinase-like TDY motif by autophosphorylation and cyclin-dependent protein kinase-activating kinase. Mol. Cell. Biol. 25: 6047-6064.
5. Gillies, S.D., et al. 2005. An anti-CD20-IL-2 immunocytokine is highly efficacious in a SCID mouse model of established human B lymphoma. Blood 105: 3972-3978.
6. Suzuki, T., et al. 2006. Mutation analyses of genes on 6p12-p11 in patients with juvenile myoclonic epilepsy. Neurosci. Lett. 405: 126-131.

CHROMOSOMAL LOCATION

Genetic locus: Ick (mouse) mapping to 9 E1.

PRODUCT

ICK 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 ICK shRNA Plasmid (m): sc-60862-SH and ICK shRNA (m) Lentiviral Particles: sc-60862-V as alternate gene silencing products.

For independent verification of ICK (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-60862A, sc-60862B and sc-60862C.

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

ICK siRNA (m) is recommended for the inhibition of ICK 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

ICK (G-8): sc-365244 is recommended as a control antibody for monitoring of ICK 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 ICK gene expression knockdown using RT-PCR Primer: ICK (m)-PR: sc-60862-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.