

SgK269 siRNA (h): sc-90265

BACKGROUND

The critical involvement of protein tyrosine kinases in signal transduction pathways is well established. These kinases can be divided into two major groups, including the receptor tyrosine kinases and the non-receptor type kinases. Non-receptor type kinases, such as Src kinases, are generally associated with the internal portion of the plasma membrane and may function as signal transducers in association with surface receptors that lack an intracellular catalytic domain. The receptor tyrosine kinase group is comprised of more than 50 members, belonging to 14 families. Ligand-induced tyrosine phosphorylation of such receptors induces receptor dimerization and subsequent autophosphorylation of specific individual phosphotyrosine residues located within their cytoplasmic domains, which serve as binding sites that interact with specific cytoplasmic molecules. SgK269 (sugen kinase 269), also known as NKF3 kinase family member, is a 1,746 amino acid protein that belongs to the protein kinase superfamily. SgK269 contains one protein kinase domain and is believed to function as a protein tyrosine kinase.

REFERENCES

1. Friedman, B., Frackelton, A.R., Jr., Ross, A.H., Connors, J.M., Fujiki, H., Sugimura, T. and Rosner, M.R. 1984. Tumor promoters block tyrosine specific phosphorylation of epidermal growth factor receptor. *Proc. Natl. Acad. Sci. USA* 81: 3034-3038.
2. Foulkes, J.G., Chow, M., Gorka, C., Frackelton, A.R., Jr. and Baltimore, D. 1985. Purification and characterization of a protein tyrosine kinase encoded by the Abelson murine leukemia virus. *J. Biol. Chem.* 260: 8070-8077.
3. Fantl, W.J., Johnson, D.E. and Williams, L.T. 1993. Signalling by receptor tyrosine kinases. *Annu. Rev. Biochem.* 62: 453-481.
4. Lemmon, M.A. and Schlessinger, J. 1994. Regulation of signal transduction and signal diversity by receptor oligomerization. *Trends Biochem. Sci.* 19: 459-463.

CHROMOSOMAL LOCATION

Genetic locus: PEAK1 (human) mapping to 15q24.3.

PRODUCT

SgK269 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SgK269 shRNA Plasmid (h): sc-90265-SH and SgK269 shRNA (h) Lentiviral Particles: sc-90265-V as alternate gene silencing products.

For independent verification of SgK269 (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-90265A, sc-90265B and sc-90265C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

SgK269 siRNA (h) is recommended for the inhibition of SgK269 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 μ M in 66 μ l. 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

SgK269 (EB-8): sc-100403 is recommended as a control antibody for monitoring of SgK269 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 SgK269 gene expression knockdown using RT-PCR Primer: SgK269 (h)-PR: sc-90265-PR (20 μ l, 434 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.