SANTA CRUZ BIOTECHNOLOGY, INC.

FLJ23356 siRNA (h): sc-77530

BACKGROUND

Serine/threonine protein kinases possess a catalytic subunit which transfers the γ phosphate from nucleotide triphosphates to one or more amino acid residue in a protein substrate side chain, resulting in a conformational change that affects protein function. Serine/threonine kinases play a role in various cellular processes, including division, proliferation, differentiation and apoptosis. The catalytic subunits of serine/threonine kinases are highly conserved between species. FLJ23356, also known as sugen kinase 196, SGK196 or protein kinase-like protein SgK196, is a 350 amino acid protein that belongs to the serine/threonine protein kinase family. FLJ23356 is thought to have a kinase domain that is catalytically inactive. It has been suggested that FLJ23356 may have a glycine-to-serine substitution motif at subdomain VII of its catalytic domain.

REFERENCES

1. Hanks, S.K., et al. 1988. The protein kinase family: conserved features and deduced phylogeny of the catalytic domains. Science 241: 42-52.
2. Hanks, S.K., et al. 1991. Protein kinase catalytic domain sequence database: identification of conserved features of primary structure and classification of family members. Methods Enzymol. 200: 38-62.
3. Hanks, S.K., et al. 1995. Protein kinases 6. The eukaryotic protein kinase superfamily: kinase (catalytic) domain structure and classification. FASEB J. 9: 576-596.
4. Manning, G., et al. 2002. Evolution of protein kinase signaling from yeast to man. Trends Biochem. Sci. 27: 514-520.
5. Stout, T.J., et al. 2004. High-throughput structural biology in drug discovery: protein kinases. Curr. Pharm. Des. 10: 1069-1082.
6. Li, B., et al. 2004. Creating chemical diversity to target protein kinases. Comb. Chem. High Throughput Screen. 7: 453-472.
7. Jaleel, M., et al. 2007. LRRK2 phosphorylates Moesin at threonine 558: characterization of how Parkinson's disease mutants affect kinase activity. Biochem. J. 405: 307-317.

CHROMOSOMAL LOCATION

Genetic locus: SGK196 (human) mapping to 8p11.21.

PRODUCT

FLJ23356 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 FLJ23356 shRNA Plasmid (h): sc-77530-SH and FLJ23356 shRNA (h) Lentiviral Particles: sc-77530-V as alternate gene silencing products.

For independent verification of FLJ23356 (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-77530A, sc-77530B and sc-77530C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

FLJ23356 siRNA (h) is recommended for the inhibition of FLJ23356 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.

GENE EXPRESSION MONITORING

FLJ23356 (S-23): sc-100433 is recommended as a control antibody for monitoring of FLJ23356 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 FLJ23356 gene expression knockdown using RT-PCR Primer: FLJ23356 (h)-PR: sc-77530-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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