SANTA CRUZ BIOTECHNOLOGY, INC.

PI 3-kinase C2γ siRNA (h): sc-61338

BACKGROUND

Phosphoinositide 3-kinase activity is implicated in assorted cellular responses activated by mammalian cell surface receptors and the regulation of protein sorting in yeast. The p110γ (PIK3CG) enzyme is activated *in vitro* by both the α and βγ subunits of heterotrimeric GTP-binding proteins (G proteins) and does not associate with a p85 adaptor molecule. PI 3-kinase C2γ, also designated p110γ, may link signaling through G protein-coupled receptors to the generation of phosphoinositide second messengers that are phosphorylated in the D-3 position. The PI 3-kinase C2γ gene encodes a 1,050-amino acid polypeptide with 36% identity to human PI 3-kinase C2α. Research indicates that PI 3-kinase C2γ can block the growth of human colon cancer cells.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: PIK3C2G (human) mapping to 12p12.3.

PRODUCT

PI 3-kinase C2γ 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 PI 3-kinase C2γ shRNA Plasmid (h): sc-61338-SH and PI 3-kinase C2γ shRNA (h) Lentiviral Particles: sc-61338-V as alternate gene silencing products.

For independent verification of PI 3-kinase C2γ (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-61338A, sc-61338B and sc-61338C.

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

PI 3-kinase C2γ siRNA (h) is recommended for the inhibition of PI 3-kinase C2γ 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

PI 3-kinase C2γ (3D8): sc-517028 is recommended as a control antibody for monitoring of PI 3-kinase C2γ 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 PI 3-kinase C2γ gene expression knockdown using RT-PCR Primer: PI 3-kinase C2γ (h)-PR: sc-61338-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.

PROTOCOLS

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