SANTA CRUZ BIOTECHNOLOGY, INC.

FGD6 siRNA (h): sc-95963

BACKGROUND

Members of the FGD family, including FGD1, FGD2, FGD3, FGD4, FGD5 and FGD6, encode guanine nucleotide exchange factors that specifically activate the Rho GTPase Cdc42. All FGD proteins contain equivalent signaling domains and a conserved structural organization, which strongly suggests that these signaling domains form a canonical core structure for members of the FGD family of RhoGEF proteins. These proteins also control essential signals required during embryonic development. FGD6 (FYVE, RhoGEF and PH domain containing 6), also known as ZFYVE24 (zinc finger FYVE domain-containing protein 24), is a 1,430 amino acid cytoplasmic protein that belongs to the FGD family and exists as two alternatively spliced isoforms. Thought to activate Cdc42 by exchanging bound GDP for free GTP, FGD6 is also implicated in maintenance of the Actin cytoskeleton and regulating cell shape. Encoded by a gene that maps to human chromosome 12q22, FGD6 contains one FYVE-type zinc finger, two PH domains and a single DH (DBL-homology) domain.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: FGD6 (human) mapping to 12q22.

PRODUCT

FGD6 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 FGD6 shRNA Plasmid (h): sc-95963-SH and FGD6 shRNA (h) Lentiviral Particles: sc-95963-V as alternate gene silencing products.

For independent verification of FGD6 (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-95963A, sc-95963B and sc-95963C.

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

FGD6 siRNA (h) is recommended for the inhibition of FGD6 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor FGD6 gene expression knockdown using RT-PCR Primer: FGD6 (h)-PR: sc-95963-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.