SANTA CRUZ BIOTECHNOLOGY, INC.

FYCO1 siRNA (h): sc-75070

BACKGROUND

FYCO1 (FYVE and coiled-coil domain containing 1), also known as ZFYVE7 or RUFY3, is a 1,478 amino acid protein that contains one RUN domain, one GOLD domain and one FYVE-type zinc finger. Expressed in heart and skeletal muscle, FYCO1 exists as multiple alternatively spliced isoforms and may play a role in transcriptional regulation events. In response to DNA damage, FYCO1 is subject to phosphorylation, probably by ATM or ATR. The gene encoding FYCO1 maps to human chromosome 3p21.31, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci. Marfan syndrome, porphyria, von Hippel-Lindau syndrome, osteogenesis imperfecta and Charcot-Marie-Tooth disease are a few of the numerous genetic diseases associated with chromosome 3.

REFERENCES

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3. Stahelin, R.V., et al. 2002. Phosphatidylinositol 3-phosphate induces the membrane penetration of the FYVE domains of Vps27p and Hrs. J. Biol. Chem. 277: 26379-26388.
4. Kiss, H., et al. 2002. Comparative human/murine sequence analysis of the common eliminated region 1 from human 3p21.3. Mamm. Genome 13: 646-655.
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6. Braga, E.A., et al. 2003. New tumor suppressor genes in hot spots of human chromosome 3: new methods of identification. Mol. Biol. 37: 194-211.
7. Falasca, M. and Maffucci, T. 2006. Emerging roles of phosphatidylinositol 3-monophosphate as a dynamic lipid second messenger. Arch. Physiol. Biochem. 112: 274-284.

CHROMOSOMAL LOCATION

Genetic locus: FYCO1 (human) mapping to 3p21.31.

PRODUCT

FYCO1 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 FYCO1 shRNA Plasmid (h): sc-75070-SH and FYCO1 shRNA (h) Lentiviral Particles: sc-75070-V as alternate gene silencing products.

For independent verification of FYCO1 (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-75070A, sc-75070B and sc-75070C.

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

FYCO1 siRNA (h) is recommended for the inhibition of FYCO1 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 FYCO1 gene expression knockdown using RT-PCR Primer: FYCO1 (h)-PR: sc-75070-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.