

KIAA1033 siRNA (h): sc-96101

BACKGROUND

KIAA1033 is a 1,173 amino acid protein that belongs to the WASHS7 family. KIAA1033 is a component of the WASH complex, which is a complex found at the surface of endosomes. The WASH complex recruits and activates Arp2/3 to induce actin polymerization. This complex is important for the fission of tubules that act as transport intermediates for the sorting of endosomes. Proteins that comprise the WASH complex include F-Actin capping protein subunit α (CapZ- α 1/2 or 3), F-Actin subunit β (CapZ- β), WASH (FAM39E, WASH2/3/4/5P or 6P), FAM21 (A/B or C), CCDC53, Strumpellin and KIAA1033. KIAA1033 contains one coiled coil domain and is post-translationally phosphorylated at serine 7. KIAA1033 exists as two alternatively spliced isoforms and is encoded by a gene that maps to human chromosome 12. Chromosome 12 encodes over 1,100 genes and comprises approximately 4.5% of the human genome. Chromosome 12 is associated with a variety of diseases and afflictions, including hypochondrogenesis, achondrogenesis, Kniest dysplasia, Noonan syndrome and trisomy 12p, which causes facial developmental defects and seizure disorders.

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CHROMOSOMAL LOCATION

Genetic locus: WASHC4 (human) mapping to 12q23.3.

PRODUCT

KIAA1033 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 KIAA1033 shRNA Plasmid (h): sc-96101-SH and KIAA1033 shRNA (h) Lentiviral Particles: sc-96101-V as alternate gene silencing products.

For independent verification of KIAA1033 (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-96101A, sc-96101B and sc-96101C.

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

KIAA1033 siRNA (h) is recommended for the inhibition of KIAA1033 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor KIAA1033 gene expression knockdown using RT-PCR Primer: KIAA1033 (h)-PR: sc-96101-PR (20 μ l, 454 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.