

PLEKHG6 siRNA (m): sc-152315

BACKGROUND

PLEKHG6 (pleckstrin homology domain containing, family G (with RhoGef domain) member 6), also known as MyoGEF (Myosin-interacting guanine nucleotide exchange factor), is a 790 amino acid protein that contains one DH (DBL-homology) domain and one PH (pleckstrin homology) domain. Existing as three alternatively spliced isoforms, PLEKHG6 is highly expressed in placenta, with lower levels in small intestine, lung, liver, kidney, thymus and heart. PLEKHG6 interacts directly with non-muscle myosin II, both of which colocalize to cleavage furrows of early anaphase cells. PLEKHG6 also activates Rho A and induces formation of Myosin filaments. Exhibiting preferential GEF activity to Rho G, PLEKHG6 forms a complex with Rho G, the Rho G effector ELMO and Ezrin. PLEKHG6 and Ezrin together induce ruffles at cell membranes and are vital for macropinocytosis. Disruption of PLEKHG6 expression results in multinucleated cells. The gene that encodes PLEKHG6 maps to human chromosome 12p13.31.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Plekhg6 (mouse) mapping to 6 F3.

PRODUCT

PLEKHG6 siRNA (m) 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 PLEKHG6 shRNA Plasmid (m): sc-152315-SH and PLEKHG6 shRNA (m) Lentiviral Particles: sc-152315-V as alternate gene silencing products.

For independent verification of PLEKHG6 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-152315A, sc-152315B and sc-152315C.

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

PLEKHG6 siRNA (m) is recommended for the inhibition of PLEKHG6 expression in mouse 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 PLEKHG6 gene expression knockdown using RT-PCR Primer: PLEKHG6 (m)-PR: sc-152315-PR (20 μ l). 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.