SANTA CRUZ BIOTECHNOLOGY, INC.

Myosin XVI siRNA (h): sc-106271

BACKGROUND

Myosins are highly conserved, ubiquitously expressed proteins that interact with Actin to generate the force for cellular movements. The human genome encodes over 40 different myosin genes which are divided into distinct classes, the most notable of which are the conventional Myosins (class II) and the unconventional Myosins (classes I and III through XVIII). Myosin XVI, also known as MYO16 or MYR8, is a 1,858 amino acid protein that localizes to the cytoplasm and contains one IQ domain, two myosin head-like domains and seven ANK repeats. Existing as an unconventional Myosin, Myosin XVI is involved in intracellular movements related to Actin filaments and is thought to interact specifically with PP1α and PP1γ, possibly playing a role in PP1-associated brain development. Multiple isoforms of Myosin XVI exist due to alternative splicing events.

REFERENCES

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7. Ikebe, M. 2008. Regulation of the function of mammalian myosin and its conformational change. Biochem. Biophys. Res. Commun. 369: 157-164.
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CHROMOSOMAL LOCATION

Genetic locus: MYO16 (human) mapping to 13q33.3.

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.

PRODUCT

Myosin XVI siRNA (h) is a pool of 2 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 Myosin XVI shRNA Plasmid (h): sc-106271-SH and Myosin XVI shRNA (h) Lentiviral Particles: sc-106271-V as alternate gene silencing products.

For independent verification of Myosin XVI (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-106271A and sc-106271B.

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

Myosin XVI siRNA (h) is recommended for the inhibition of Myosin XVI 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 Myosin XVI gene expression knockdown using RT-PCR Primer: Myosin XVI (h)-PR: sc-106271-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.