SANTA CRUZ BIOTECHNOLOGY, INC.

PDE6C siRNA (h): sc-106391

BACKGROUND

PDE6C (cGMP phosphodiesterase 6C), also known as PDEA2, is an 858 amino acid cell membrane protein that contains two GAF domains and belongs to the cyclic nucleotide phosphodiesterase family. Composed of two α subunits, which associate with three smaller proteins of 11, 13 and 15 kDa, PDE6C binds two divalent metal cations per subunit. The gene that encodes PDE6C consists of approximately 53,423 bases and maps to human chromosome 10q23.33. Defects in PDE6C are the cause of cone dystrophy type 4 (COD4), an early-onset cone dystrophy. Cone dystrophies are characterized by progressive degeneration of the cone photoreceptors with preservation of rod function. Rod degeneration may, however, be present in some cone dystrophies, especially at late stages. Affected individuals suffer from photophobia, as well as loss of visual acuity, color vision and central field vision. Another sign of COD4 is the absence of macular lesions for many years.

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CHROMOSOMAL LOCATION

Genetic locus: PDE6C (human) mapping to 10q23.33.

PRODUCT

PDE6C 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 PDE6C shRNA Plasmid (h): sc-106391-SH and PDE6C shRNA (h) Lentiviral Particles: sc-106391-V as alternate gene silencing products.

For independent verification of PDE6C (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-106391A, sc-106391B and sc-106391C.

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

PDE6C siRNA (h) is recommended for the inhibition of PDE6C 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 PDE6C gene expression knockdown using RT-PCR Primer: PDE6C (h)-PR: sc-106391-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.