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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

SANTA CRUZ BIOTECHNOLOGY, INC.

PPP1R15B siRNA (m): sc-152418

BACKGROUND

PPP1R15B (protein phosphatase 1, regulatory (inhibitor) subunit 15B), also known as CREP, is a 713 amino acid protein belonging to the PPP1R15 family. Functioning as part of a complex that contains PP1 and NCK1/2, PPP1R15B assists the essential process of dephosphorylation of eIF2α, a transcription initiation factor, by way of protein phosphatase 1 (PP1) catalytic subunits. The complex, however, can be inhibited by salubrinal, a drug that protects cells from endoplasmic reticulum stress. PPP1R15B is a strong, direct-target candidate for activation of nuclear factor erythroid 2-related factor (Nrf2), which regulates transcription of several gene products involved in the protective response to oxidative stress. Gene overexpression can occur at chromosome 1q32.1, which includes PPP1R15B, suggesting that the region is involved in the pathogenesis of glioblastoma multiforme (GBM).

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CHROMOSOMAL LOCATION

Genetic locus: Ppp1r15b (mouse) mapping to 1 E4.

PRODUCT

PPP1R15B 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PPP1R15B shRNA Plasmid (m): sc-152418-SH and PPP1R15B shRNA (m) Lentiviral Particles: sc-152418-V as alternate gene silencing products.

For independent verification of PPP1R15B (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-152418A, sc-152418B and sc-152418C.

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

PPP1R15B siRNA (m) is recommended for the inhibition of PPP1R15B 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 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 PPP1R15B gene expression knockdown using RT-PCR Primer: PPP1R15B (m)-PR: sc-152418-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.