SANTA CRUZ BIOTECHNOLOGY, INC.

eIF2S3 siRNA (h): sc-91300

BACKGROUND

The initiation of protein synthesis in eukaryotic cells is regulated by interactions between protein initiation factors and RNA molecules. The eukaryotic initiation complex is composed of three subunits, designated eIF2α, eIF2β and eIF2γ (eukaryotic translation initiation factor 2 α, β and γ, respectively), all of which work in concert to form a ternary complex with GTP and tRNA in the early stages of protein synthesis. eIF2S3 (eukaryotic translation initiation factor 2, subunit 3), also known as EIF2G, is a 472 amino acid protein that belongs to the γ subfamily of GTP-binding elongation factor proteins. Existing as a heterotrimer composed of an α, β and γ chain, eIF2S3 functions to bind ribosomal subunits and catalyze the subsequent formation of preinitiation complexes necessary for protein synthesis.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: EIF2S3 (human) mapping to Xp22.11.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PRODUCT

eIF2S3 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 eIF2S3 shRNA Plasmid (h): sc-91300-SH and eIF2S3 shRNA (h) Lentiviral Particles: sc-91300-V as alternate gene silencing products.

For independent verification of eIF2S3 (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-91300A, sc-91300B and sc-91300C.

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

eIF2S3 siRNA (h) is recommended for the inhibition of eIF2S3 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 eIF2S3 gene expression knockdown using RT-PCR Primer: eIF2S3 (h)-PR: sc-91300-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.