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EF-1 γ siRNA (m): sc-155889

BACKGROUND

EF-1 (elongation factor-1) is a multi-protein complex that is responsible for the delivery of aminoacyl-tRNAs to the ribosome. EF-1 γ (elongation factor 1- γ), also known as EEF1G or GIG35, is a 437 amino acid subunit of the EF-1 complex. Expressed in stomach, pancreas, brain, lung, kidney, intestine, liver and spleen, EF-1 γ contains an N-terminal glutathione transferase domain which is thought to be involved in anchoring the complex to various cellular components. Additionally, EF-1 γ may play a key role in the assembly of multiprotein complexes containing aminoacyl-tRNA synthetases. Increased expression of EF-1 γ is associated with pancreatic cancer, suggesting a possible role for EF-1 γ in the oncogenic transformation process.

REFERENCES

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- Wang, C.C., et al. 2004. Molecular hierarchy in neurons differentiated from mouse ES cells containing a single human chromosome 21. *Biochem. Biophys. Res. Commun.* 314: 335-350.
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CHROMOSOMAL LOCATION

Genetic locus: Eef1g (mouse) mapping to 19 A.

PRODUCT

EF-1 γ siRNA (m) is a target-specific 19-25 nt siRNA 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 EF-1 γ shRNA Plasmid (m): sc-155889-SH and EF-1 γ shRNA (m) Lentiviral Particles: sc-155889-V as alternate gene silencing products.

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.

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

EF-1 γ siRNA (m) is recommended for the inhibition of EF-1 γ 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.

GENE EXPRESSION MONITORING

EF-1 γ (C-7): sc-393378 is recommended as a control antibody for monitoring of EF-1 γ gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor EF-1 γ gene expression knockdown using RT-PCR Primer: EF-1 γ (m)-PR: sc-155889-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.