SignalChem
Specialists in Signaling Proteins
1-866-9 KINASE (54-6273)

Catalog #	Aliquot Size
Y71-911-05	3 x 5 nmol
Y71-911-20	3 x 20 nmol
Y71-911-50	3 x 50 nmol

14-3-3 alpha/beta siRNA Set I

siRNA duplexes targeted against three exon regions

Catalog # Y71-911

Lot # Z2013-1

Specificity

14-3-3 alpha/beta siRNAs are designed to specifically knock-down human 14-3-3 alpha/beta expression.

Product Description

14-3-3 alpha/beta siRNA is a pool of three individual synthetic siRNA duplexes designed to knock-down human 14-3-3 alpha/beta mRNA expression. Each siRNA is 19-25 bases in length. The gene accession number is NM_003404.

Gene Aliases

14-3-3 alpha/beta, YWHAB, HS1, GW128, KCIP-1

Storage and Stability

The lyophilized powder is stable for at least 4 weeks at room temperature. It is recommended that the lyophilized and resuspended siRNAs are stored at or below -20°C. After resuspension, siRNA stock solutions ≥2 µM can undergo up to 50 freeze-thaw cycles without significant degradation. For long-term storage, it is recommended that the siRNA is stored at -70°C. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

Scientific Background

14-3-3□/□ is a member of the highly conserved 14-3-3 family of proteins which mediate signal transduction by binding to phosphoserine-containing proteins (1). 14-3-3□/□ protein has been shown to interact with RAF1 and CDC25 phosphatases, suggesting that it may play a role in linking mitogenic signaling and the cell cycle machinery. 14-3-3-□ interacts with the TSC1-TSC2 dimer (2). The interaction required phosphorylation of TSC2 at Ser1210. Binding of 14-3-3-□ to TSC2 did not alter the interaction between TSC1 and TSC2, but it reduced the ability of the complex to inhibit phosphorylation of ribosomal protein S6 kinase impairing the ability of the complex to inhibit cell growth.

References

1. Yaffe, M B. et al: The structural basis for 14-3-3:phosphopeptide binding specificity. Cell 91: 961-971, 1997.
2. Shumway, S D. et al: 14-3-3-beta binds to and negatively regulates the tuberous sclerosis complex 2 (TSC2) tumor suppressor gene product, tuberin. J. Biol. Chem. 278: 2089-2092, 2003.

Formulation

The siRNAs are supplied as a lyophilized powder and shipped at room temperature.

Reconstitution Protocol

Briefly centrifuge the tubes (maximum RCF 4,000g) to collect lyophilized siRNA at the bottom of the tube. Resuspend the siRNA in 50 µl of DEPC-treated water (supplied by researcher), which results in a 1x stock solution (10 µM). Gently pipet the solution 3-5 times to mix and avoid the introduction of bubbles. Optional: aliquot 1x stock solutions for storage.

Related Products

Product Name	Catalog Number
14-3-3 alpha/beta Protein	Y71-30G
14-3-3 alpha/beta Protein	Y71-30N

14-3-3 alpha/beta siRNA Set I

siRNA duplexes targeted against three exon regions

Catalog Number	Y71-911
Specific Lot Number	*Z2013-1*
Packaging Specification	2.5 nmol/tube for 3 x 5 nmol
Format	Lyophilized powder
Stability	1yr at -70°C from date of shipment
Storage & Shipping	The lyophilized powder is stable for at least 4 weeks at room temperature. It is recommended that the lyophilized and resuspended siRNAs are stored at or below -20°C. After resuspension, siRNA stock solutions ≥2 µM can undergo up to 50 freeze-thaw cycles without significant degradation. For long-term storage, it is recommended that the siRNA is stored at -70°C. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

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