

| Catalog # | Aliquot Size |
|-------------------|--------------------|
| A16-911-05 | 3 x 5 nmol |
| A16-911-20 | 3 x 20 nmol |
| A16-911-50 | 3 x 50 nmol |

AKT1/PKB alpha siRNA Set I

siRNA duplexes targeted against three exon regions

Catalog # A16-911

Lot # Z2013-15

Specificity

AKT1/PKB alpha siRNAs are designed to specifically knock-down human AKT1/PKB alpha expression.

Product Description

AKT1/PKB alpha siRNA is a pool of three individual synthetic siRNA duplexes designed to knock-down human AKT1/PKB alpha mRNA expression. Each siRNA is 19-25 bases in length. The gene accession number is [NM_005163](#).

Gene Aliases

PKB; RAC; PRKBA; MGC99656; RAC-ALPHA

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 μ M 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

AKT1/PKB is a serine/threonine kinase that belongs to the AKT family. AKT1 is activated in cells in response to diverse stimuli such as hormones, growth factors and extracellular matrix components and is involved in glucose metabolism, transcription, survival, cell proliferation, angiogenesis, and cell motility (1). AKT1 is frequently overexpressed and active in many types of human cancers including cancers of colon, breast, brain, pancreas and prostate as well as lymphomas and leukemias (2).

References

- Coffer, P.J. et al: Protein kinase B (c-Akt): a multifunctional mediator of phosphatidylinositol 3-kinase activation. *Biochem J.* 1998 Oct 1; 335 (Pt 1): 1-13.
- Anderson, K.E. et al: Translocation of PDK-1 to the plasma membrane is important in allowing PDK-1 to activate protein kinase B. *Curr Biol.* 1998 Jun 4;8(12): 684-91.

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 μ l of DEPC-treated water (supplied by researcher), which results in a 1x stock solution (10 μ M). 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 |
|-----------------------------|----------------|
| AKT1, Active | A16-10G |
| AKT1 Mutant (E17K), Active | A16-12G |
| AKT2, Active | A17-10H |
| AKT2, Active | A17-10G |
| AKT2 Mutant (E17K), Active | A17-12G |
| AKT2 Mutant (R274H), Active | A17-12BG |
| AKT3, Active | A18-10G |
| AKT3 Mutant (G171R), Active | A18-12BG |
| AKT1, Unactive | A16-14G |
| AKT2, Unactive | A17-15H |

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siRNA duplexes targeted against three exon regions

| | |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Catalog Number | A16-911 |
| Specific Lot Number | Z2013-15 |
| Packaging Specifications | 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 μ M 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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