

Catalog #	Aliquot Size
A09-911-05	3 x 5 nmol
A09-911-20	3 x 20 nmol
A09-911-50	3 x 50 nmol

ALK1 siRNA Set I

siRNA duplexes targeted against three exon regions

Catalog # A09-911

Lot # Z2013-22

Specificity

ALK1 siRNAs are designed to specifically knock-down human ALK1 expression.

Product Description

ALK1 siRNA is a pool of three individual synthetic siRNA duplexes designed to knock-down human ALK1 mRNA expression. Each siRNA is 19-25 bases in length. The gene accession number is [NM_000020](#).

Gene Aliases

ACVRL1, ACVRLK1, ALK1, HHT, HHT2, ORW2, SKR3, ALK1, TSR-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 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

ALK1 is a serine/threonine-protein kinase receptor R3 precursor that mediates signal by TGF β superfamily (1). ALK1 functions as a TGF β type I receptor in endothelial cells and is responsible for human hereditary hemorrhagic telangiectasia (HHT) type II. Distinct Smad proteins (i.e., Smad2/Smad3 and Smad1/Smad5) show interaction with ALK1 and mediate TGF β signaling. Northern blot and RT-PCR analysis show that ALK1 specifically induces expression of Smad6, Smad7, Id1, Id2, endoglin, STAT1, and interleukin 1 receptor in endothelial cells. ALK1 expression in inflammatory myofibroblastic tumor of the urinary bladder have also has been reported (2).

References

- Ota, T. et al: Targets of transcriptional regulation by two distinct type I receptors for transforming growth factor-beta in human umbilical vein endothelial cells. *J. Cell Physiol.* 2002;193(3):299-318.
- Tsuzuki, T. et al: ALK1 expression in inflammatory myofibroblastic tumor of the urinary bladder. *Am. J. Surg. Pathol.* 2004; 28(12):1609-14.

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
ALK1, Active	A09-11G
ALK, Active	A19-11G
ALK Mutant (F1174S), Active	A19-12FG
ALK Mutant (L1196M), Active	A19-12GG
ALK Mutant (S1206R), Active	A19-12IG
ALK2, Active	A06-11G
ALK2 Mutant (R206H), Active	A06-12BG
ALK3 (BMPRI1A), Active	B04-11G

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Catalog Number	A09-911
Specific Lot Number	Z2013-22
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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