

Catalog #	Aliquot Size
<b>B04-911-05</b>	<b>3 x 5 nmol</b>
<b>B04-911-20</b>	<b>3 x 20 nmol</b>
<b>B04-911-50</b>	<b>3 x 50 nmol</b>

## ALK3 (BMPR1A) siRNA Set I

siRNA duplexes targeted against three exon regions

### Catalog # B04-911

Lot # Z2013-26

### Specificity

ALK3 (BMPR1A) siRNAs are designed to specifically knock-down human ALK3 (BMPR1A) expression.

### Product Description

ALK3 (BMPR1A) siRNA is a pool of three individual synthetic siRNA duplexes designed to knock-down human ALK3 (BMPR1A) mRNA expression. Each siRNA is 19-25 bases in length. The gene accession number is [NM\\_004329](#).

### Gene Aliases

ALK3; BMPR1A; 10q23del; ACVRLK3; CD292; SKR5

### 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  $\geq 2$   $\mu$ 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

BMPR1A (also known as bone morphogenetic protein receptor 1A) is a member of the transmembrane serine/threonine kinase family that include the type I receptors BMPR1A and BMPR1B and the type II receptor BMPR2. BMPR1A act as a minor susceptibility gene for PTEN-mutation-negative Cowden syndrome. BMPR1A regulates the PTEN protein levels by decreasing PTEN's association with the degradative pathway (1). BMPR1A trafficking plays a significant role in FOP pathogenesis and is also involved in human T-cell differentiation (2)

### References

- Waite, K. A. et.al: BMP2 exposure results in decreased PTEN protein degradation and increased PTEN levels. *Hum. Molec. Genet.* 12: 679-684, 2003.
- Cejalvo, T. et.al: Bone morphogenetic protein-2/4 signalling pathway components are expressed in the human thymus and inhibit early T-cell development. *Immunology* 121: 94-104, 2007.

### 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  $\mu$ l of DEPC-treated water (supplied by researcher), which results in a 1x stock solution (10  $\mu$ 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
ALK3 (BMPR1A). Active	B04-11G
ALK, Active	A19-11G
ALK Mutant (F1174S), Active	A19-12FG
ALK Mutant (L1196M), Active	A19-12GG
ALK Mutant (S1206R), Active	A19-12IG
ALK1, Active	A09-11G
ALK2, Active	A06-11G
ALK2 Mutant (R206H), Active	A06-12BG

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Catalog Number	B04-911
Specific Lot Number	Z2013-26
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 $\geq 2$ $\mu$ 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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