EIF2AK2 siRNA Set I
siRNA duplexes targeted against three exon regions

Catalog # P80-911
Lot # Z2037-11

Specificity
EIF2AK2 siRNAs are designed to specifically knock-down human EIF2AK2 expression.

Product Description
EIF2AK2 siRNA is a pool of three individual synthetic siRNA duplexes designed to knock-down human EIF2AK2 mRNA expression. Each siRNA is 19-25 bases in length. The gene accession number is NM_002759.

Gene Aliases
PKR, PRKR, EIF2AK1

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
EIF2AK2 (also known as double-stranded RNA-activated protein kinase) is a protein kinase that has been shown to be involved in HIV/gp120-associated neurodegeneration (1). EIF2AK2 acts as a critical mediator of gp120 neurotoxicity and is a substrate for a family of protein kinases that respond to various forms of environmental stress. Activation of EIF2AK2 leads to its autophosphorylation and then phosphorylation of its natural substrate, the alpha subunit of eukaryotic protein synthesis initiation factor-2. EIF2AK2 plays a critical role in mRNA translation, cell proliferation and apoptosis. A novel cross-talk between the EIF2AKs and p53 has been shown that has implications in cell proliferation and tumorigenesis (2).

References

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.

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