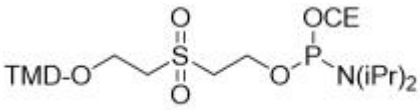
5’ Phosphate Amidite (O-DMT-2,2’-sμlfonyldiethanol)

Article number： KF-YG0876

specification： 250mg

Product information

Structural formula:



Product description

5’-phosphoramidite enables the introduction of a phosphate group at the 5’ end of an oligonucleotide. Oligonucleotides with a 5’-phosphate are valuable tools in many molecular biology applications, including gene construction, cloning, mutagenesis, and ligation chain reaction. The quantification of the DMT protecting group removed during the standard deblocking step synthesis will yield the phosphorylation efficiency.

Synthesis conditions

Before dilution, ensure all products are at the bottom of the vial. Dilute to the

recommended concentration and mix thoroughly in a sealed vial to ensure all contents dissolved.

Dilution: 100 μmol / mL

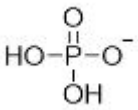
Coupling: 2-minute coupling

de-protection conditions

The deprotection conditions for this phosphoramidite will depend on the type of phosphoramidite used to synthesize the oligonucleotide. If a fast-rotecting phosphoramidite is used, deprotection is carried out in concentrated NH4OH at 60° C for 1 hour. If a standard phosphoramidite used, deprotection is carried out in concentrated NH4OH at 60° C for 5 hours.

The DMT group and the sulfamoyl ethyl group will be during the ammonia deprotection process, thereby eliminating the option of DMT-ON cartridge purification. Purification: The modified 5'-phosphoramidite oligonucleotide can be desalted using a Micure purification column or ethanol precipitation. Purification of the product can be completed using gel electrophoresis or ion-exchange HPLC.

Images of the cleavage and deprotection structures:



After conjugation and post-treatment, the added mass of the product (the additional mass observed by mass spectrometry) is: 79.98

Product Nature

Molecular formula: C34H45N2O5PS

Molecular weight: 656.77

Appearance: Colorless

Transportation and storage

Transport conditions: Cold

Storage conditions: Store at -15 to -30° C