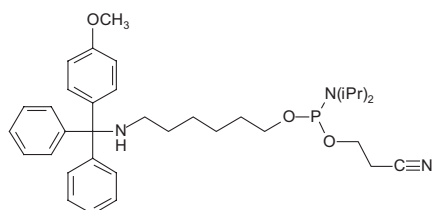


User Instructions

# MMT-Amino Linker Phosphoramidite



MMT-Amino hexanol-β-Cyanoethylphosphoramidite

**Product Description**

Chemical Formula: C<sub>35</sub>H<sub>48</sub>N<sub>3</sub>O<sub>3</sub>P

Formula Weight: 589.8

Storage: -20°C

**Product List**

M010282-01	0.25g PE™ 8900 and Polygen™ compatible
M010232-01	0.25g ABI™ compatible

**Method**

1. Use anhydrous acetonitrile (water content < 30ppm) to dissolve the MMT-amino linker phosphoramidite. It is important to maintain anhydrous conditions when dissolving the linker compound in acetonitrile.

2. For use on PE™ 8900 instruments, add 5ml acetonitrile to 0.25g MMT-amino linker phosphoramidite (M010282-01) to obtain a concentration of 50mg/ml.

For use on PE 390 series instruments, add 4.2ml acetonitrile to 0.25g MMT-amino linker phosphoramidite (M010232-01) to prepare a 0.1M solution.

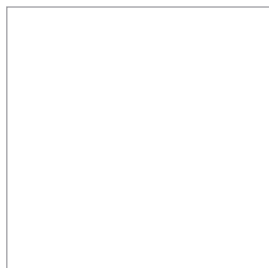
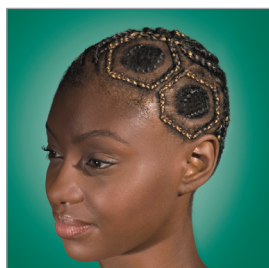
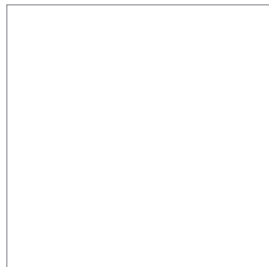
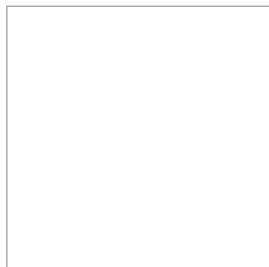
3. The MMT-amino linker phosphoramidite is a viscous oil that requires more time to dissolve than powdered phosphoramidites. Gently swirl the vial until the linker is completely dissolved.

4. Attach the dissolved phosphoramidite to the appropriate position on the synthesizer.

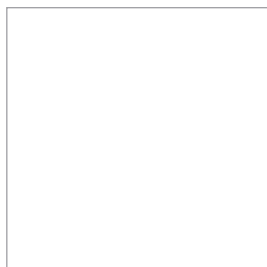
Ensure that the delivery line to the synthesis chamber is sufficiently primed.

5. Enter the sequence of the oligonucleotide you wish to synthesize with MMT-amino linker phosphoramidite. The coupling time for MMT-amino linker phosphoramidite is the same as that recommended by the instrument manufacturer for the four standard DNA phosphoramidites A, C, G and T. Note that the MMT-amino linker phosphoramidite will terminate the synthesis and can only be employed in the last coupling step on the 5' terminus.

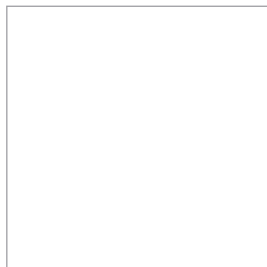
6. Proceed as you would with a standard DNA oligonucleotide synthesis. Depending on your intended further usage of the oligomer, you can either choose Trityl-On, or, Trityl-Off procedures. The coupling efficiency of the MMT-amino linker phosphoramidite may be determined by a monomethoxytrityl cation assay in Trityl-Off mode.



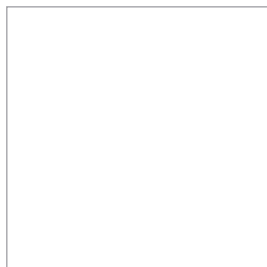
# MMT-Amino Linker Phosphoramidite



7. We recommend to elongate the last acidic deblocking step, for the release of the MMT-group on the amino linker, in Trityl-Off mode. A deprotection time of 5 minutes is sufficient.



8. Upon synthesis in Trityl-Off mode, treat the CPG-bound oligonucleotide with an excess of a 10% solution of triethylamine in acetonitrile for 10 minutes at room temperature and wash with acetonitrile. This procedure cleaves the cyanoethyl-protective groups from the phosphate moieties of the oligonucleotide and prevents side-reactions arising from the alkylation of the primary amine.



9. Cleave and deprotect the oligonucleotide with ammonia at 40°C for 24 hours with standard protected nucleobases, or, if TAC-protected phosphoramidites are used, at 55°C for 15 minutes.



10. The oligonucleotide is now ready for further processing, such as desalting or purification with RP-HPLC, AX-HPLC or gel-based methods. Cartridge-based reverse phase methods are suitable for oligonucleotides prepared with the MMT-amino linker phosphoramidite in Trityl-On mode.

11. Oligonucleotides prepared in Trityl-On mode are further deprotected by a treatment with 80% acetic acid for 3 hours at room temperature. Acetic acid is removed by vacuum centrifugation. Free MMT residues can be removed, if desired, by extraction of an aqueous solution of the oligonucleotide with diethyl ether.

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