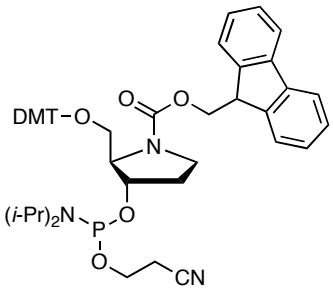
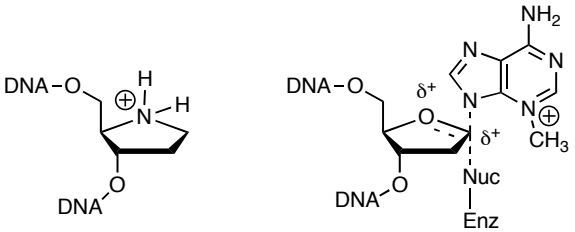
Fmoc-Pyrrolidine CEP
Product No. BA 0295
Product Information



$C_{50}H_{56}N_3O_7P$
Mol. Wt.: 841.97

Verdine and co-workers[1] described the use of Fmoc-Pyrrolidine CEP to install (2*R*,3*S*)-2-hydroxymethyl-3-hydroxypyrrolidine (3-hydroxyprolinol) residues into DNA (**1**). Such oligonucleotides were found to be potent and selective inhibitors of *E. coli* 3-methyladenine DNA glycosylase II (AlkA). The pyrrolidine ring, which should be protonated under experimental conditions, is proposed to mimic the charged intermediate **2** encountered during glycosyl hydrolysis. Related 3-hydroxyprolinol-bearing oligonucleotides have been made and subjected to hybridization studies.[2]



1 **2**

Coupling, deprotection, and purification: Verdine and co-workers recommend normal synthesis protocols except for a 4 minute coupling. Cleavage and deprotection with concentrated ammonium hydroxide was performed at 55 °C for 12 h, and purification was achieved by gel electrophoresis. Nucleoside base composition analysis was successful, but showed a 10% impurity.

References:

1. Scharer, O. D.; Ortholand, J.-Y.; Ganesan, A.; Ezaz-Nikpay, K.; Verdine, G. L. *J. Am. Chem. Soc.*, **1995**, *117*, 6623-6624.

2. Ceulemans, G.; Van Aerschot, A.; Rozenski, J. Herdewijn, P. *Tetrahedron* **1997**, *53*, 14957-14974.