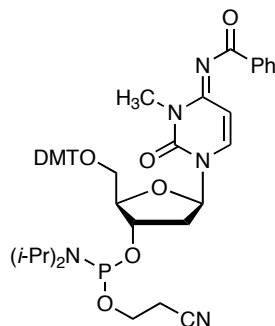


## 3-Methyl-dC CEP (BA 0282)

### Product Information



The formation and repair of alkylated DNA continues to be an important area of research. It has been shown that 3-methyl-2'-deoxycytidine (m3C) residues may be introduced site-specifically into DNA using the phosphoramidite 3-Methyl-dC CEP (BA 0282).<sup>1</sup>

**Coupling:** In our hands, coupling occurs to the extent of >98% with normal coupling protocols. A literature report<sup>1</sup> employed *i*-Pr-Pac-dG-, Pac-dA-, and Ac-dC-protected amidites and phenoxyacetic anhydride as the capping reagent.

**Cleavage and nucleobase deprotection:** According to the literature,<sup>1</sup> concentrated aqueous ammonium hydroxide at 55 °C for 16 h is useful.

#### Reference:

1. See for example "Mutagenesis, genotoxicity, and repair of 1-methyladenine, 3-alkylcytosines, 1-methylguanine, and 3-methylthymine in *alkB Escherichia coli*," Delaney, J.; Essigmann, J. M., *PNAS*, **2004**, *101*, 14051-14056. The supporting information of this paper includes the experimental details for the incorporation of m3C into oligonucleotides.