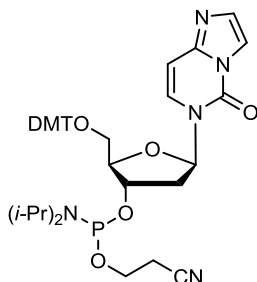


3,*N*⁴-Etheno-dC CEP Product No. BA 0391

Product Information



C₄₁H₄₈N₅O₇P
Mol. Wt.: 753.82

3,*N*⁴-Etheno-dC is a naturally occurring DNA modification that arises from the mutagenic effect of vinyl chloride metabolites.^{1,2} In addition to the utility of 3,*N*⁴-Etheno-dC in understanding this mutagenesis and carcinogenesis, the intrinsic fluorescence of the modified base is useful in assessing the structure, dynamics and interactions of nucleic acids.^{3,4} BA 0391 (3,*N*⁴-Etheno-dC CEP) can be used for the efficient incorporation of this fluorescent moiety into DNA multiple times. Oligonucleotides containing this modified nucleoside form intact duplexes with only slight changes in duplex stability.³

Use: Dissolve the phosphoramidite in acetonitrile at concentrations recommended by the synthesizer manufacturer. Coupling and cleavage should be carried out protocols. Highest yields are obtained with deprotection at 65 °C for 2 h. Please note that the etheno group is not stable to ammonium hydroxide over longer periods.

Reference

- 1) Srivastava, S.C.; Raza, S.K.; Misra, R. *Nucleic Acids Res.* **1994**, *22*, 1296-1304.
- 2) Zhang, W.; Rieger, R.; Iden, C.; Johnson, F. *Chem. Res. Toxicol.* **1995**, *8*, 148-156.
- 3) Li, Z.; Qian, X.; Xu, Y. *Dyes and Pigments*, **2002**, *54*, 247-252.
- 4) Ming, X.; Seela, F. *Chem. Eur. J.* **2012**, *18*, 9590-9600.