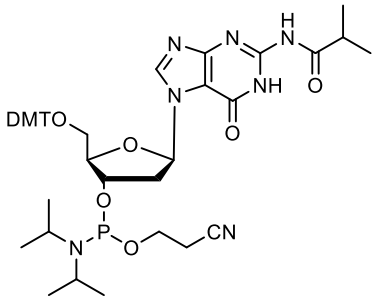
N^7-dG CEP

Product No. BA 0423

Product Information



$C_{44}H_{54}N_7O_8P$
Mol. Wt.: 839.93

Once installed into an oligonucleotide, the BA 0423 N^7dG CEP residue mimics a protonated cytosine enabling triple helix formation.

Triplex technology is a valuable means of studying the mechanisms of DNA repair, gene regulation, DNA damage, recombination andmutagenesis[1] In 1995 Dervan et al. introduced N^7 deoxyguanosine for triple helix formation with GC base pairs.[2] Their work showed that pyrimidine oligonucleotides with N^7 dG bound to GC base pairs with high specificity, and it was noted that this third strand was parallel to the purine Watson-Crick strand. This orientation is reversed from the known G•GC triplex. Further studies showed that the N^7 dG containing oligonucleotides form a more stable triple helix with contiguous guanosine base residues while 5-methylcytosine residues increase the triple helix stability in regions with isolated GC base pairs.[3]

Use: Dissolve the phosphoramidite in acetonitrile at concentrations recommended by the synthesizer manufacturer. Coupling should be carried out using standard instrument protocols. Cleavage from the solid support can be carried out under standard conditions, and standard deprotection conditions may be employed.

References:

1. Mukherjee, A., Vasquez, K.M. *Biochimie.* **2011**, *93*(8), 1197-1208.
2. Hunziker, J., Priestley, E.S., Brunar, H. and Dervan, P.B. *J. Am. Chem. Soc*. **1995**, *117*, 2661-2662.
3. Brunar, H.; Dervan, P.B.. *Nucleic Acids Research,* **1996**, *24*(11), 1987-1991.