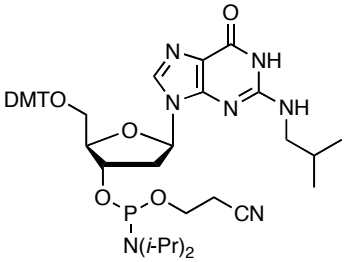
N^2-Isobutyl-dG CEP (BA 0250)

Product Information



Guanine bases in DNA are susceptible to *N*-alkylation by various carcinogens, leading to miscoding and mutagenicity. Choi and Guengerich have prepared a series of N^2-alkyl-2'-deoxyguanosine phosphoramidites where the alkyl group ranges in size from methyl to anthracenylmethyl for studies on the effect of the size of these groups on the catalytic efficiency and fidelity of various DNA polymerases.[1] We offer the N^2-methyl- (BA 0249), N^2-ethyl- (BA 0076), and N^2-isobutyl-dG (BA 0250) phosphoramidites[1] as well an additional bulkier choice, the N^2-neopentyl version (BA 0200). Researchers may find this "steric tool box" useful for probing the steric requirements at N^2 of dG in various applications.

Use: According to Choi and Guengerich,[1] standard DNA synthesis protocols were used. In our hands, *the phosphoramidite was not very soluble in acetonitrile* and was thus fully dissolved by adding 1 part of dichloromethane followed by 4.5 parts of acetonitrile to achieve the standard dilution factor as recommended by the instrument manufacturer. The order of solvent addition is important; dissolution in dichloromethane should be first. Once dissolved, coupling proceeded normally using standard instrument protocols.

(1) Choi, J.-Y.; Guengerich, F. P. *J. Biol. Chem.* **2004**, *279* , 19217-19229.