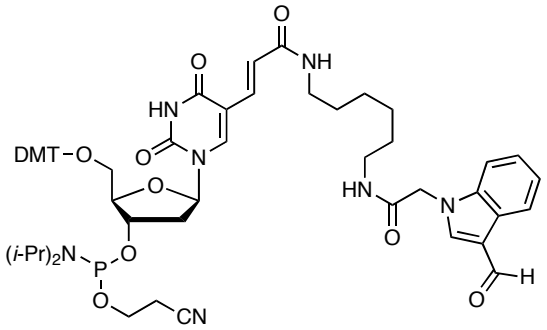
Formylindole-dT CEP
Product No. BA 0301
Product Information



$C_{59}H_{70}N_7O_{11}P$
Mol. Wt.: 1084.20

Aldehydes are attractive electrophiles for bioconjugation, since they react with nucleophiles such as amines and hydrazines to form imines and hydrazones, respectively. For the incorporation of an aldehyde functional group into an oligonucleotide, its reactivity often necessitates carrying it through solid-phase synthesis in protected or otherwise masked form, thus requiring one or more post-synthetic unmasking transformations. Saito and co-workers[1] reported that an aldehyde can be incorporated directly using a 3-formylindole nucleoside phosphoramidite via solid-phase nucleic acid synthesis. The electron-donating indole ring offered some stabilization of the aldehyde while retaining enough electrophilic character to allow conjugation with hydrazines and hydrazones. We now offer Formylindole-dT CEP,[2] which features a tether between the formylindole nucleus and the oligonucleotide strand. Internal and 5'-incorporation are possible.

Use: Employ acetonitrile diluent at the concentration recommended by the synthesizer manufacturer. Extended coupling times are not recommended and may be detrimental. Cleavage from the solid support and nucleobase deprotection with concentrated ammonium hydroxide may be carried out using standard protocols, e.g., 55 °C for 8-16 h. For conjugation reactions, a related formylindole has been condensed with hydrazines and hydrazides by heating in 10 mM sodium acetate in ethanol for 24 h at 60 °C or carrying out the conjugation while the oligonucleotide is still attached to the CPG support.[1] For the present compound, no coupling conditions have been determined.[2]

Literature

1. Okamoto, A.; Tainaka, K.; Saito, I. *Tetrahedron Lett.* **2002**, *43*, 4581-4583.

2. This new compound is from our Experimental Grab Bag. The compounds in this unique collection have not been validated for any particular oligonucleotide application. We hope that you may find them of interest, but please be aware that their purchase and use is at your own risk.