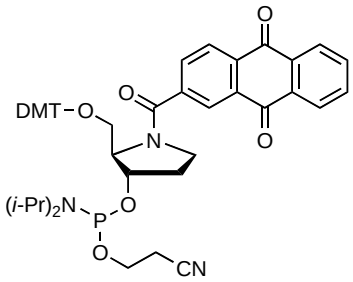
Anthraquinone-pyrrolidine CEP
Product No. BA 0300
Product Information



Introduction: Anthraquinones may be incorporated into oligonucleotides by a variety of methods using a host of different phosphoramidites. The anthraquinone moiety is useful for applications such as intercalation, duplex and triplex stabilization, photochemical immobilization, quenching of fluorescence, electrochemical detection, and charge transport through nucleic acids. Of the various anthraquinone phosphoramidites that have been explored, amide formation at the carboxyl group of anthraquinone-2-carboxylic acid is popular.[1-8] The linker between the anthraquinone amide and the phosphoramidite can be a simple aliphatic group with no DMT group (5'-incorporation only),[1,4,5,8] an aliphatic linker with a DMT group,[7] or the anthraquinone may be tethered to the nucleobase or 2'-hydroxyl group of a nucleoside phosphoramidite,[2,3,6] the latter two strategies allowing internal incorporation into an oligonucleotide. Alternatively, the anthraquinone amide may be formed post-synthetically.

Hydroxyprolinol has found use as a substitute for the sugar ring of nucleotides.[9,10] We now offer Anthraquinone-pyrrolidine CEP, a 3-hydroxyprolinol analog bearing an anthraquinone amide at the pyrrolidine amino group. The anthraquinone pyrrolidine can be installed internally or at the 5'-terminus of an oligonucleotide.

Use: Employ acetonitrile diluent at the concentration recommended by the synthesizer manufacturer. Improved coupling efficiency is achieved by extending the coupling time to 15 min. Cleavage from the solid support and nucleobase deprotection with concentrated ammonium hydroxide may be carried out using standard protocols. For HPLC, the anthraquinone amide moiety can be observed at 334 nm.

Note: This product is from our Experimental Grab Bag. The compounds in this unique collection have not been validated for any particular purpose. We hope that you may find them interesting, but please be aware that their purchase and use is at your own risk.

Literature

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