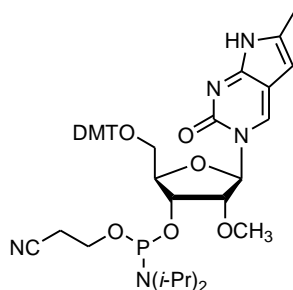


2'-O-Methyl-pyrrolo C CEP Product No. BA 0356

Product Information



$C_{43}H_{52}N_5O_8P$
Mol. Wt.: 797.88

Pyrrolo-C (PC) is a fluorescent analog of cytidine.¹ It is highly fluorescent, the 2'-deoxy version exhibiting an emission maximum at 473 nm when incorporated into a 19-mer oligodeoxyribonucleotide, where it base-pairs normally with dG. Pyrrolo-C has proven to be useful for monitoring RNA secondary structure formation, where its fluorescence is reversibly quenched upon base-pairing.² PC has been used to follow the kinetics of formation and dissociation of an RNA/DNA complex and has been used to monitor the thermal denaturation of the central segment of an RNA duplex.² Most recently, PC has been incorporated into native and minimal hammerhead ribozymes at cleavage site position C17, where it was found to be capable of efficient photocrosslinking to G12, resulting in catalytically active RNA that was useful in structural studies.³ Thompson and co-workers have studied the photophysical properties of these fluorescent pyrrolopyrimidines.⁴

Use: For oligonucleotide synthesis, employ acetonitrile diluent at the concentration recommended by the synthesizer manufacturer. Use standard coupling protocols for RNA. Cleavage from the solid support may be carried out by standard procedures.

References:

- (1) 1. Berry, D.A.; Jung, K.-Y.; Wise, D.S.; Sercel, A.D.; Pearson, W.H.; Mackie, H.; Randolph, J.B.; Somers, R.J., *Tetrahedron Lett.* **2004**, 45 (11), 2457-2461.
- (2) Tinsley, R.A.; Walter, N.G., *RNA*, **2006**, 12, 522-529.
- (3) Lambert, D.; Heckman, J. E.; Burke, J. M., *Biochemistry*, **2006**, 45, 7140-7147.
- (4) Thompson, K. C.; Miyake, N., *J. Phys. Chem. B*, **2005**, 109, 6012-6019.