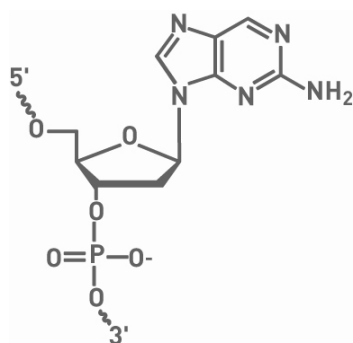


## 2-Aminopurine

### Structure



### Key data

$A_{\text{max}}$  303 nm     $E_{\text{max}}$  371 nm

Extinction Coef (260 nm): 1,000  
Extinction Coef (at absorbance max): 3,600

5' MW: 313.2 g/mol  
Int MW: 313.2 g/mol

### Properties

2-Aminopurine can substitute for dA in an oligonucleotide. It is a naturally fluorescent base that is sensitive to the local environment making it a useful probe for monitoring the structure and dynamics of DNA hairpins and for detecting the base stacking state of a duplex. 2-Aminopurine can be destabilizing and slightly lower the  $T_m$ .

2-Aminopurine has a high quantum yield, however upon incorporation into DNA the fluorescence is somewhat quenched and the decay become complex.<sup>i</sup> The sensitivity of 2-Aminopurine has made it useful in probes studying DNA conformations.<sup>ii</sup>

<sup>i</sup> P. Wu, H. Li, TM Nordlund Proc. of Spie. "Multistate modeling of the time and temperature dependence of fluorescence from 2-aminopurine in a DNA decamer" **1990**, (1204) 262-269

<sup>ii</sup> TM Nordlund, P. Wu, S. Anderson, L. Nilsson, R. Rigler, A. Graslund, LW. McLaughlin, B. Gilda "Structural dynamics of DNA sensed by fluorescence from chemically modified bases" **1990**, (1204) 344-353