

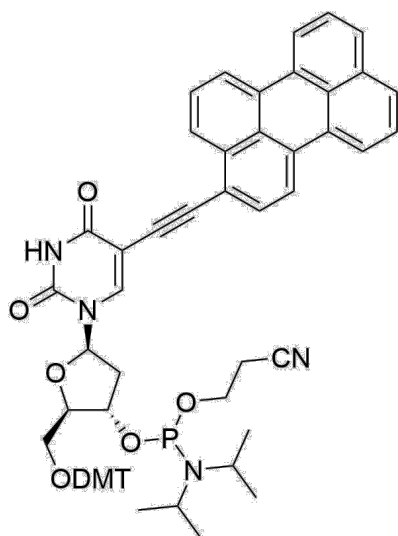
Perylene dU phosphoramidite

<http://www.lumiprobe.com/p/perylene-amidite-du>

Perylene is a bright and extremely photostable fluorescent polycyclic aromatic hydrocarbon (PAH) label with a quantum yield approaching quantitative. Due to the low lifetime of fluorescence, this probe does not form excimers.

With this phosphoramidite, perylene can be introduced into DNA by automated oligonucleotide synthesis. Perylene is attached to the 5' position of deoxyuridine (dU) through a triple bond and the fluorophore is electronically coupled to the deoxyuridine base. This coupling of dU and perylene makes the fluorescence sensitive to the base pairing of the dU portion of the molecule, allowing the discrimination between perfect and one base mismatched targets.

This amidite requires no special handling, coupling, or deprotection conditions. Recommended diluent is acetonitrile.



Structure of Perylene dU phosphoramidite

General properties

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|---------------------|---|
| Appearance: | orange solid |
| Molecular weight: | 1005.1 |
| CAS number: | 908117-78-2 |
| Molecular formula: | C ₆₁ H ₅₇ N ₄ O ₆ P |
| Solubility: | good in dichloromethane and acetonitrile |
| Quality control: | NMR ¹ H, ³¹ P, HPLC-MS (95%) |
| Storage conditions: | Storage: 12 months after receipt at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Avoid prolonged exposure to light. Desiccate. |

Spectral properties

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| Excitation/absorption maximum, nm: | 435; 408; 252 |
| ε, L·mol ⁻¹ ·cm ⁻¹ : | 36000 |
| Emission maximum, nm: | 439; 467 |
| Fluorescence quantum yield: | 1.0 |

Oligo synthesis details

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| Diluent: | acetonitrile |
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