

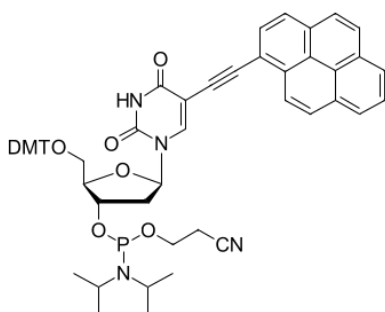
Pyrene phosphoramidite dU

<http://www.lumiprobe.com/p/pyrene-phosphoramidite-du>

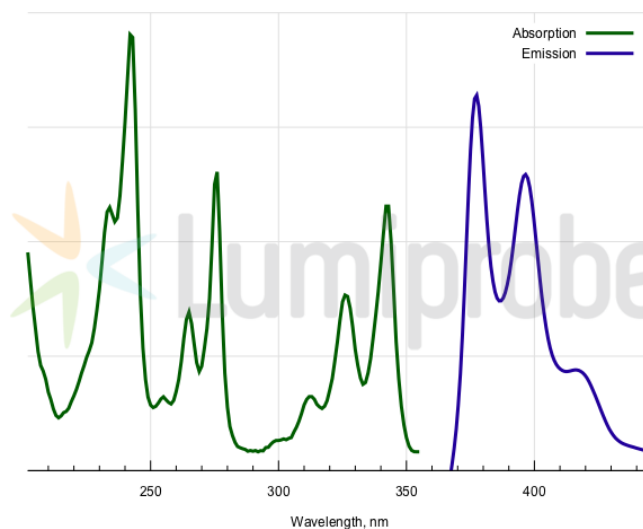
Pyrene is a polycyclic aromatic hydrocarbon that is well-known for its ability to intercalate into DNA. Pyrene features intense blue fluorescence. Its parameters depend strongly on the fluorophore microenvironment. Therefore, fluorescence spectra of pyrene are used for the extraction of structural information about the site surrounding pyrene. Two pyrenes in close proximity usually form excimers easily detectable by excimer fluorescence. Pyrene can also be a FRET donor to other fluorophores such as perylene.

With this phosphoramidite, pyrene can be introduced into DNA by means of automated synthesis. This pyrene phosphoramidite contains hydrocarbon moiety rigidly attached to deoxyuridine. This reagent allows attaching pyrene fragment to 5', internal, or 3' position (using universal support).

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



Structure of Pyrene dU phosphoramidite



Absorption and emission spectra of pyrene fluorophore

General properties

| | |
|---------------------|--|
| Appearance: | yellowish foam |
| Molecular weight: | 955.04 |
| CAS number: | 199920-17-7 |
| Molecular formula: | C ₅₇ H ₅₅ N ₄ O ₈ P |
| Solubility: | good in dichloromethane and acetonitrile |
| Quality control: | NMR ¹ H (95%), ³¹ P, HPLC-MS |
| 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. |
| Legal statement: | This Product is offered and sold for research purposes only. It has not been tested for safety and efficacy in food, drug, medical device, cosmetic, commercial or any other use. Supply does not express or imply authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, in the manufacture of food or pharmaceutical products, in medical devices or in cosmetic products. |

Spectral properties

| | |
|--|----------------------------|
| Excitation/absorption maximum, nm: | 260; 282; 365; 392 |
| ε, L·mol ⁻¹ ·cm ⁻¹ : | 12600; 21900; 16000; 14200 |
| Emission maximum, nm: | 460 |
| Fluorescence quantum yield: | ~0.1 |

Oligo synthesis details

Diluent: acetonitrile