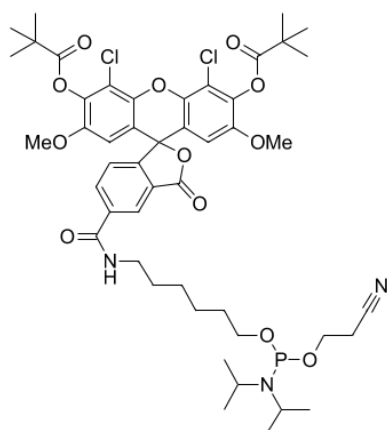


JOE phosphoramidite, 5-isomer

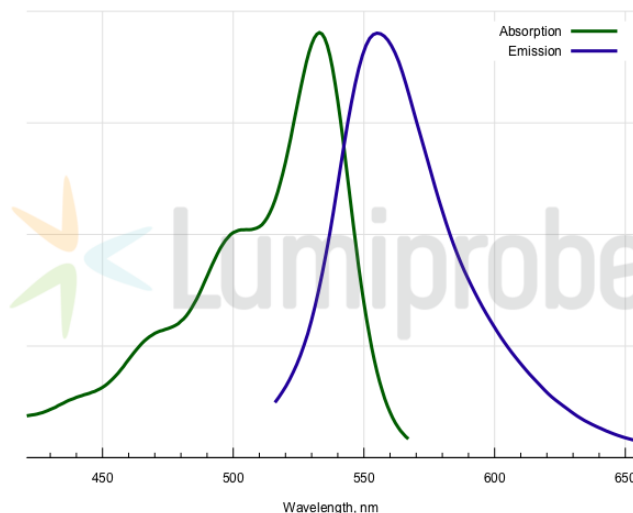
<http://www.lumiprobe.com/p/joe-phosphoramidite-5>

JOE is a xanthene dye, fluorescein derivative possessing two chloro- and two methoxy substituents. This fluorophore is a useful label for oligonucleotides. Its absorption and emission spectra are located between FAM and TAMRA.

The fluorophore can be introduced into oligonucleotide using this phosphoramidite. It tolerates standard ammonium deblock conditions. This product contains a pure isomer of 5-JOE dye.



5-JOE phosphoramidite structure



Absorption and emission spectra of JOE dye

General properties

| | |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Appearance: | colorless solid |
| Molecular weight: | 972.88 |
| Molecular formula: | C ₄₈ H ₆₀ N ₃ Cl ₂ O ₁₂ P |
| Solubility: | good in DCM, acetonitrile |
| Quality control: | NMR ¹ H, ³¹ P, HPLC-MS (95%), functional testing |
| 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: | 533 |
| ε, L·mol ⁻¹ ·cm ⁻¹ : | 75000 |
| Emission maximum, nm: | 554 |
| Fluorescence quantum yield: | 0.61 |
| CF ₂₆₀ : | 0.36 |
| CF ₂₈₀ : | 0.28 |

Oligo synthesis details

| | |
|----------------------|----------------------------------------------------|
| Diluent: | acetonitrile |
| Coupling conditions: | standard coupling, identical to normal nucleobases |

Cleavage conditions: ammonia, 2 h at room temperature
Deprotection conditions: identical to protected nucleobases