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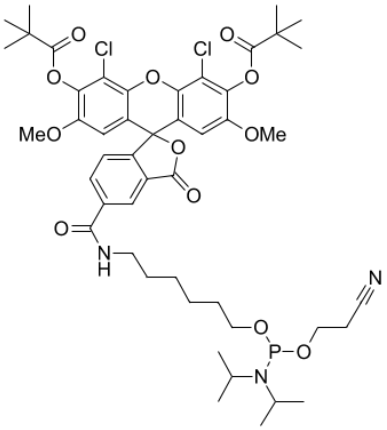
JOE phosphoramidite, 5-isomer

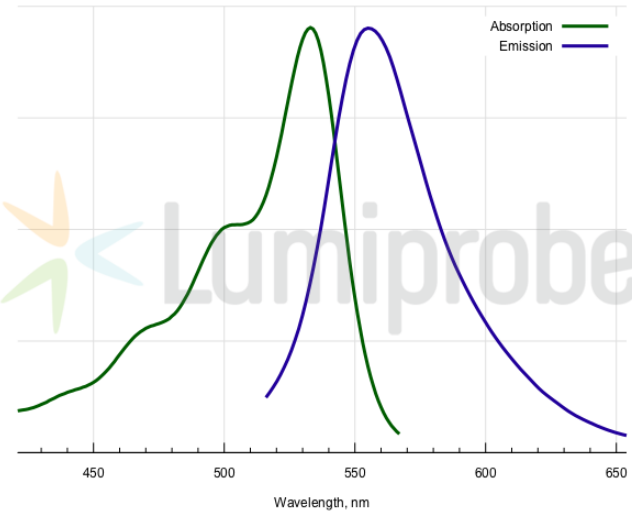
http://www.lumiprobe.com/p/joe-phosphoramidite-5

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:	$C_{48}H_{60}N_3Cl_2O_{12}P$
Solubility:	good in DCM, acetonitrile
Quality control:	NMR ^{1}H, ^{31}P, HPLC-MS (95%), functional testing
Storage conditions:	Storage: 12 months after receival 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, $L \cdot mol^{-1} \cdot cm^{-1}$:	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