Lumiprobe Corporation
201 International Circle, Suite 135
Hunt Valley, Maryland 21030
USA
Phone: +1 888 973 6353
Fax: +1 888 973 6354
Email: order@lumiprobe.com

FAM-dT phosphoramidite

http://www.lumiprobe.com/p/fam-dt-phosphoramidite

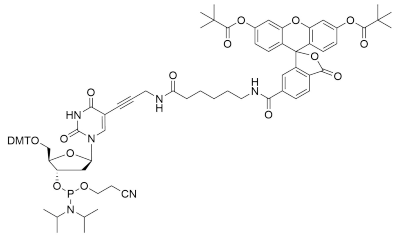
This phosphoramidite allows fluorescein (FAM) to be introduced into any position in the oligonucleotide sequence during synthesis by the phosphoramidite method (in the middle of the chain, at the 5'- and 3'-terminus). The reagent is a conjugate of deoxythymidine phosphoramidite and 6-isomer of FAM. Modification is performed during oligonucleotide synthesis by substituting standard dT phosphoramidite with fluorescein-dT phosphoramidite. This modification does not affect exonuclease or polymerase activity.

For modification with fluorescein at the 5'-terminus use FAM phosphoramidite, 6-isomer.

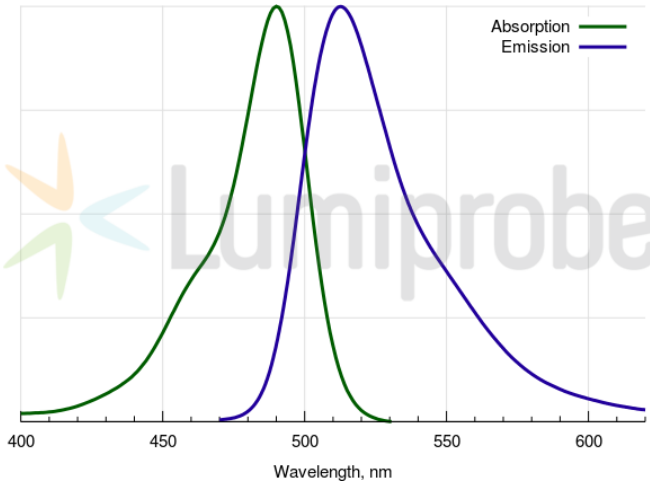
Usage

Coupling: 10 minutes

Deprotection: standard conditions using ammonium hydroxide; deprotection time depends on oligonucleotide composition and nucleobase protecting groups (deprotection for 17 h at 55 °C removes all protecting groups from standard nucleobases). AMA (solution of 30% ammonium hydroxide/40% aqueous methylamine 1:1 v/v) can be used with ~5% of non-fluorescent side product forming. To avoid formation of the side product, start deprotection with ammonium hydroxide (30 min at room temperature), then add an equal volume of 40% aqueous methylamine and continue deprotection as required with AMA (e.g. 10 min at 65 °C).



Structure of Fluorescein-dT phosphoramidite



Absorption and emission spectra of FAM

General properties

Appearance:	off white powder
Molecular weight:	1423.54
Molecular formula:	$C_{79}H_{87}N_6O_{17}P$
Solubility:	good in acetonitrile, DCM
Quality control:	NMR ^{1}H, NMR ^{31}P, HPLC-MS
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:	492
ε, $L \cdot mol^{-1} \cdot cm^{-1}$:	74000
Emission maximum, nm:	517
Fluorescence quantum yield:	0.93
CF_{260}:	0.22
CF_{280}:	0.17

Oligo synthesis details

Diluent:	acetonitrile