Lumiprobe Corporation
115 Airport Dr Suite 160
Westminster, Maryland 21157
USA
Phone: +1 888 973 6353
Fax: +1 888 973 6354
Email: order@lumiprobe.com

SIMA-dT phosphoramidite, 6-isomer

http://www.lumiprobe.com/p/sima-dt-amidite-6

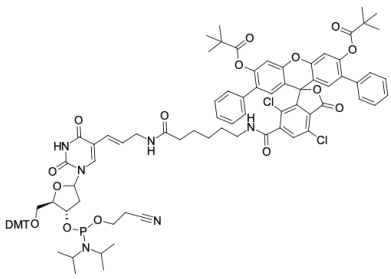
SIMA-dT phosphoramidite is used to introduce SIMA in the sequence during oligonucleotide synthesis, usually as a substitute for the native dT linkage.

SIMA is known to be much more stable than HEX in basic media thus deprotection in harsh conditions using ammonium hydroxide (up to 6-8 hours at 55 °C) is possible as well as AMA at room temperature or at 65 °C.

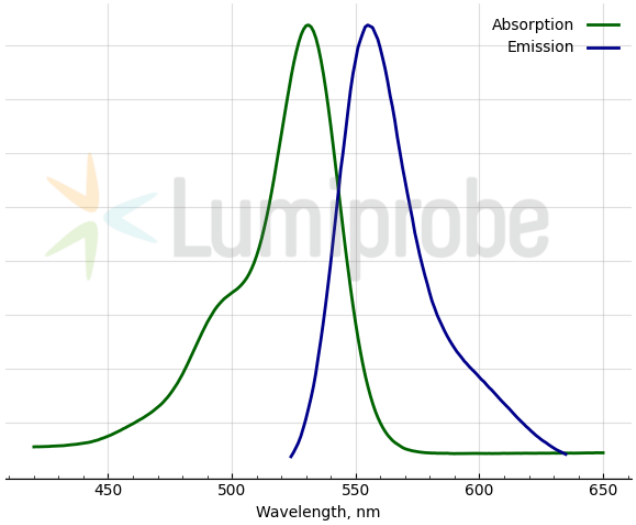
Recommendations for using the reagent:

Coupling: 6 minutes coupling time recommended.

Deprotection: standard method recommended, can be deprotected with AMA (1:1 mixture of concentrated aqueous ammonium hydroxide / 40% aqueous methylamine).



Structure of SIMA-dT phosphoramidite, 6-isomer



Absorption and emission spectra of SIMA

General properties

Appearance:	white powder
Molecular weight:	1646.67
Molecular formula:	$C_{91}H_{95}Cl_2N_6O_{17}P$
Solubility:	Good solubility in acetonitrile and DCM
Quality control:	NMR ^1H and HPLC-MS (95+%)
Storage conditions:	12 months after receival at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate. Avoid prolonged exposure to light.

Spectral properties

Excitation/absorption maximum, nm:	531
ε, $L \cdot mol^{-1} \cdot cm^{-1}$:	92300
Emission maximum, nm:	555
Fluorescence quantum yield:	0.63
CF_{260}:	0.57
CF_{280}:	0.18

Oligo synthesis details

Diluent:	acetonitrile
Coupling conditions:	standard coupling, identical to normal nucleobases
Deprotection conditions:	identical to protected nucleobases