

SIMA-dT phosphoramidite, 6-isomer

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

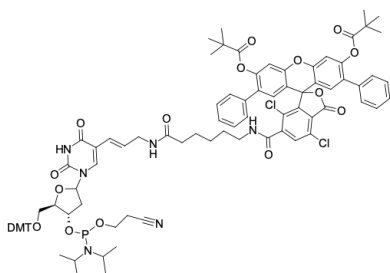
SIMA-dT phosphoramidite is used to introduce SIMA in the sequence during oligonucleotide synthesis, usually as a substitute for the native dT linkage.

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.

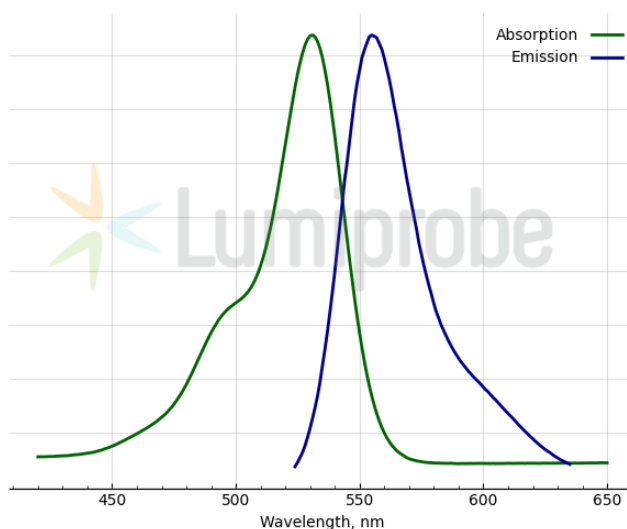
Recommendations for using the reagent:

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 ₂ N ₆ O ₁₇ P
Solubility:	Good solubility in acetonitrile and DCM
Quality control:	NMR ¹ H and HPLC-MS (95+%)
Storage conditions:	12 months after receipt 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·mol ⁻¹ ·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