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## SIMA-dT phosphoramidite, 6-isomer

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

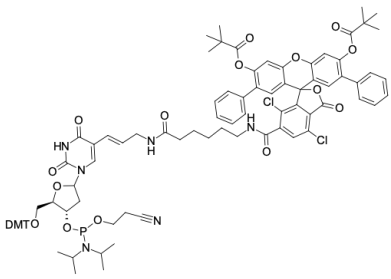
SIMA-dT phosphoramidite is used to introduce SIMA in the sequence during oligonucleotide synthesis, usually as a substitute for the native dT linkage.

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.

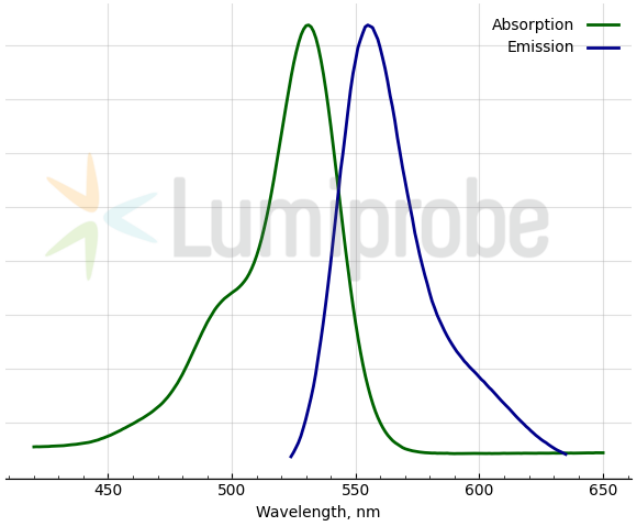
# Recommendations for using the reagent:

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. |
| 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: | 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 |