

DusQ® 1 dT phosphoramidite

<http://www.lumiprobe.com/p/bhq1-du-phosphoramidite>

DusQ 1 dT phosphoramidite is a modified oligo synthesis reagent bearing true dark quencher nucleotide base typically used to internally label DNA oligonucleotide probe. DusQ 1 efficiently quench fluorescence by FRET quenching and through static quenching via formation of a ground state complex with the reporter dye, and typically used to construct qPCR probes with a quencher moiety.

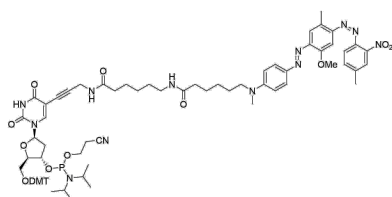
Reagent contains a DMT protection of the hydroxymethyl group, which allows oligonucleotide purification on cartridges. DusQ 1 can be paired with reporter dyes emitting in the green to yellow region to form completely non-fluorescent combination. DusQ 1 has a broad absorption spectrum with maximum in a range 480–580 nm and works in conjunction with the commonly used fluorophores, e.g. [FAM](#), [TET](#), [JOE](#), [HEX](#), and [Cyanine3](#).

Usage

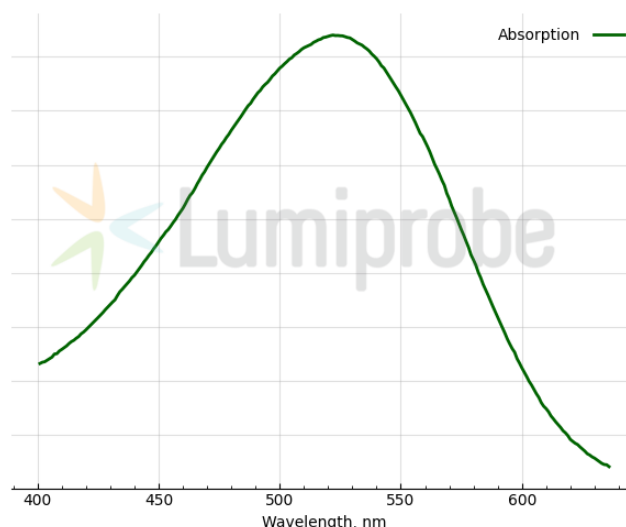
Coupling: 6 minutes coupling time recommended.

Deprotection: for 2 h at RT using ammonium hydroxide, or 10 min at 65 °C with AMA (solution of 30% ammonium hydroxide/40% aqueous methylamine 1:1 v/v).

Deprotection time depends on oligonucleotide composition and nucleobase protecting groups, and additional modifications.



Structure of DusQ1 dT phosphoramidite



Absorption spectrum of DusQ 1

General properties

Appearance: black powder

Molecular weight: 1411.58

Molecular formula: $C_{76}H_{91}N_{12}O_{13}P$

Quality control: NMR 1H , ^{31}P , HPLC-MS (95%)

Storage conditions: Storage: 12 months after receipt 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: 522

ϵ , L·mol⁻¹·cm⁻¹: 27300

Oligo synthesis details

Coupling conditions: 6 min coupling time

Cleavage conditions: ammonia, 2 h at room temperature

Deprotection conditions: identical to protected nucleobases