

DusQ® 2 dT phosphoramidite

<http://www.lumiprobe.com/p/bhq2-du-phosphoramidite>

DusQ® 2 dT phosphoramidite is a modified oligo synthesis reagent bearing completely non-fluorescent quencher nucleotide base typically used to internally label DNA oligonucleotide probe. DusQ 2 has large extinction coefficient, efficiently quench fluorescence for dyes emitting in the far red region, such as Cyanine5.

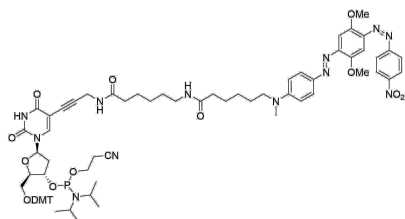
DusQ 2 is typically used to construct qPCR probes with a quencher moiety. Reagent contains a DMT protection of the hydroxymethyl group, which allows oligonucleotide purification on cartridges. DusQ 2 has a absorption spectrum in of red and near-infrared range and can be paired with reporter dyes that emit in the range 560–670 nm, e.g. [TAMRA](#), [ROX](#), [Cyanine3](#), and [Cyanine5](#).

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 DusQ2 dT phosphoramidite

General properties

| | |
|---------------------|--|
| Appearance: | black powder |
| Molecular weight: | 1413.55 |
| Molecular formula: | C ₇₅ H ₈₉ N ₁₂ O ₁₄ P |
| Quality control: | NMR ¹ H, ³¹ P, HPLC-MS (95%) |
| Storage conditions: | 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: 552

Oligo synthesis details

| | |
|--------------------------|------------------------------------|
| Coupling conditions: | 6 min coupling time |
| Cleavage conditions: | ammonia, 2 h at room temperature |
| Deprotection conditions: | identical to protected nucleobases |