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DusQ® 1 amidite, 5'-terminal

http://hk.lumiprobe.com/p/bhq1-amidite-terminal

DusQ® 1 is a fluorescence quencher with the most effective absorption in the range of 480–580 nm, the maximum absorption is at 522 nm.

As it was demonstrated for a complete analogue of this quencher, both dynamic (FRET) and static fluorescence quenching can be described [1-2]. For this reason, DusQ 1 can be used in hybridization probes such as TaqMan, Molecular Beacon, Scorpion to quench the fluorescence of a wide range of fluorophores including FAM, JOE, VIC, R6G, HEX, TET.

The use of nonfluorescent quenchers as FRET pair acceptors has many advantages compared to the use of fluorophores as quenchers. As part of the probe, the DusQ 1 chromophore more efficiently absorbs the fluorescence of the FRET-pair donor, which makes it possible to significantly reduce the background fluorescence of the probe and, thus, increase the signal-to-noise ratio and increase the dynamic range of the signal.

Probes based on DusQ 1 are conveniently used in multiplex analysis, since this quencher, unlike fluorescent FRET acceptors, does not possess its own fluorescence and does not «occupy» the detecting channels available to the researcher.

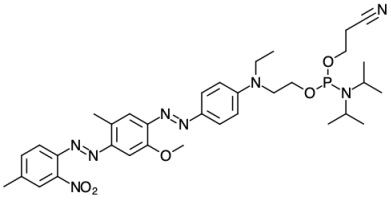
Usage

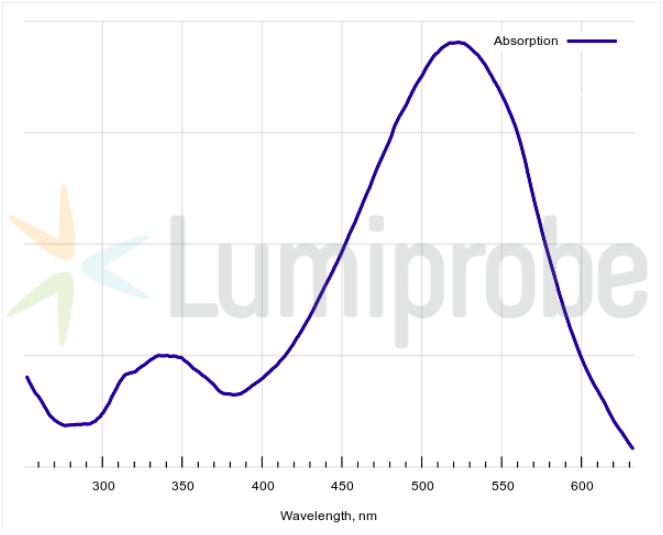
Coupling: 4 minutes

Deprotection: 2 hours at room temperature using concentrated ammonia or 10 min at 65 °C using AMA mixture, concentrated aqueous ammonia/40% methylamine (1:1).

[1] Johansson MK, Fidder H, Dick D, Cook RM. Intramolecular dimers: a new strategy to fluorescence quenching in dual-labeled oligonucleotide probes. J Am Chem Soc. 2002 Jun 19;124(24):6950-6. doi: 10.1021/ja025678o. PMID: 12059218.

[2] Johansson MK. Choosing reporter-quencher pairs for efficient quenching through formation of intramolecular dimers. Methods Mol Biol. 2006;335:17-29. doi: 10.1385/1-59745-069-3:17. PMID: 16785617.





外观:

分子量: 676.75

分子式: $C_{34}H_{45}N_8O_5P$

溶解度:

质量控制:

储存条件:

法律声明: 本產品僅供研究目的提供和銷售。本產品並未經過食品、藥品、醫療器械、化妝品等領域的安全性和效力測試，且未經明示或暗示授權用於其他任何用途，包括但不限於體外診斷、人類或動物用途，以及商業用途。

激发/吸收极大值，纳米: 522

ε, 摩尔吸光系数，cm^{-1}: 27300

CF_{260}: 0.17

CF_{280}: 0.10

稀释剂: