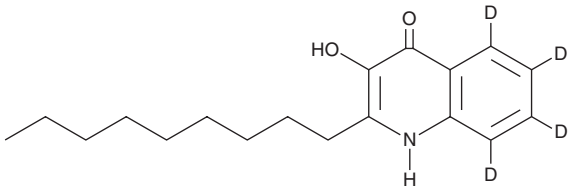
PRODUCT INFORMATION

2-nonyl-3-hydroxy-4-Quinolone-d_4

Item No. 9003969

Formal Name:	3-hydroxy-2-nonyl-4(1H)-quinolinone-d_4
Synonym:	C9-PQS-d_4
MF:	$C_{18}H_{21}D_4NO_2$
FW:	291.4
Chemical Purity:	≥98% (2-nonyl-3-hydroxy-4-Quinolone)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_4); ≤1% d_0
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Synthetic



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

2-nonyl-3-hydroxy-4-Quinolone-d_4 is intended for use as an internal standard for the quantification of 2-nonyl-3-hydroxy-4-quinolone (Item No. 9002699) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

2-nonyl-3-hydroxy-4-Quinolone-d_4 is supplied as a solid. A stock solution may be made by dissolving the 2-nonyl-3-hydroxy-4-quinolone-d_4 in the solvent of choice, which should be purged with an inert gas. 2-nonyl-3-hydroxy-4-Quinolone-d_4 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 2-nonyl-3-hydroxy-4-quinolone-d_4 in these solvents is approximately 5, 25, and 15 mg/ml, respectively.

Description

2-nonyl-3-hydroxy-4-Quinolone is a bacterial quorum-sensing signal molecule produced by *P. aeruginosa*.[1] It activates a biosensor for the *P. aeruginosa* gene *pqsA*, which encodes the first enzyme in the *P. aeruginosa* biosynthesis of the bacterial quorum-sensing signal molecule 2-heptyl-3-hydroxy-4-quinolone (Item No. 29186), in a concentration-dependent manner.[2]

References

1. Nguyen, A.T., Jones, J.W., Ruge, M.A., *et al.* Iron depletion enhances production of antimicrobials by *Pseudomonas aeruginosa*. *J. Bacteriol.* **197(14)**, 2265-2275 (2015).
2. Fletcher, M.P., Diggle, S.P., Crusz, S.A., *et al.* A dual biosensor for 2-alkyl-4-quinolone quorum-sensing signal molecules. *Environ. Microbiol.* **9(11)**, 2683-2693 (2007).

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