

PRODUCT INFORMATION



DMABA-d₁₀ NHS ester

Item No. 11219

CAS Registry No.: 1175002-05-7
Formal Name: 4-[di(methyl-d₃)amino]-benzoic-2,3,5,6-d₄ acid, 2,5-dioxo-1-pyrrolidinyl ester

Synonyms: 4-(dimethylamino) Benzoic Acid-d₁₀, DMABA N-hydroxysuccinimide ester-d₁₀, N-Succinimidyl 4-(dimethylamino)benzoate-d₁₀

MF: C₁₃H₄D₁₀N₂O₄
FW: 272.3

Chemical Purity: ≥98% DMABA NHS ester

Deuterium

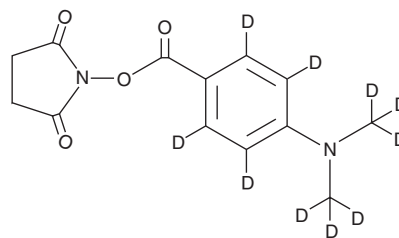
Incorporation: ≥99% deuterated forms (d₁-d₁₀); ≤1% d₀

UV/Vis.: λ_{max}: 235, 322 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥2 years



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

Laboratory Procedures

DMABA-d₁₀ NHS ester is intended for use in combination with DMABA NHS ester (Item No. 11216) as a derivatizing reagent for PE lipids in order to facilitate MS characterization and to quantify relative changes in their abundance.

DMABA-d₁₀ NHS ester is supplied as a crystalline solid. A stock solution may be made by dissolving the DMABA-d₁₀ NHS ester in the solvent of choice. DMABA-d₁₀ NHS ester is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of DMABA-d₁₀ NHS ester in these solvents is approximately 20 mg/ml.

Description

DMABA-d₁₀ and DMABA NHS esters have been shown to facilitate the characterization of PE lipids via electrospray mass spectrometry by providing a common precursor ion scan for diacyl, ether, and plasmalogen PE lipids.¹ Furthermore, application of split-and-pool methodology allows for relative changes in endogenous PE lipid levels between control and treated samples to be measured.²

Phosphatidylethanolamine (PE) lipids are important components of cell membranes and biochemical pathways of fatty acid synthesis that contain abundant polyunsaturated fatty acyl groups. Oxidation of these phospholipids may be linked to various human diseases. DMABA NHS ester is a reagent that reacts with the primary amine group of PE lipids.^{1,2} This facilitates the use of electrospray tandem mass spectrometry for the detection of diacyl, ether, and plasmalogen PE lipids that cannot be readily observed otherwise.^{1,2}

References

1. Zemski Berry, K.A., Turner, W.W., VanNieuwenhze, M.S., *et al.* Stable isotope labeled 4-(dimethylamino) benzoic acid derivatives of glycerophosphoethanolamine lipids. *Anal. Chem.* **81(16)**, 6633-6640 (2009).
2. Zemski Berry, K.A., Turner, W.W., VanNieuwenhze, M.S., *et al.* Characterization of oxidized phosphatidylethanolamine derived from RAW 264.7 cells using 4-(dimethylamino)benzoic acid derivatives. *Eur. J. Mass Spectrom* **16(3)**, 463-470 (2010).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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