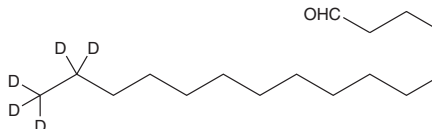


Product Information



Hexadecanal-d₅ Catalog No. 16834

Formal Name:	hexadecanal-15,15,16,16,16-d ₅
Synonyms:	16-Hexadecanal, Palmitaldehyde
MF:	C ₁₆ H ₂₅ D ₅ O
FW:	243.4
Chemical Purity:	≥96% Hexadecanal
Deuterium Incorporation:	≤1% d ₀
Stability:	≥1 year at -20°C
Supplied as:	A solution in methyl acetate



Laboratory Procedures

Hexadecanal-d₅ contains five deuterium atoms at the 15, 15', 16, 16, and 16 positions. It is intended for use as an internal standard for the quantification of hexadecanal by GC- or LC-mass spectrometry (MS). For long term storage, we suggest that hexadecanal-d₅ be stored as supplied at -20°C. It should be stable for at least one year.

Hexadecanal-d₅ is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of hexadecanal-d₅ in these solvents is approximately 30 and 10 mg/ml, respectively.

Hexadecanal-d₅ is used as an internal standard for the quantification of hexadecanal by stable isotope dilution 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).

Sphingosine-1-phosphate (S1P) is a potent bioactive phospholipid that exhibits a broad spectrum of biological activities including cell proliferation, survival, migration, cytoskeletal organization, and morphogenesis.¹ Hexadecanal is the 16-carbon aldehyde analog of palmitic acid. It is produced from the irreversible cleavage of S1P by S1P lyase 1 and is a major component of plasmalogen.^{2,3}

References

1. Leclercq, T.M. and Pitson, S.M. Cellular signalling by sphingosine kinase and sphingosine 1-phosphate. *IUBMB Life* **58**, 467-472 (2006).
2. Reiss, U., Oskouian, B., Zhou, J., *et al.* Sphingosine-phosphate lyase enhances stress-induced ceramide generation and apoptosis. *J. Biol. Chem.* **279**(2), 1281-1290 (2004).
3. Pyne, S. and Pyne, N.J. Sphingosine 1-phosphate signalling in mammalian cells. *Biochem. J.* **349**, 385-402 (2000).

Related Product

Sphingosine-1-phosphate - Cat. No. 62570

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSDS supervisor at your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will meet our specifications at the time of delivery.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a refund of the purchase price, or at Cayman's option, the replacement, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

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