



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



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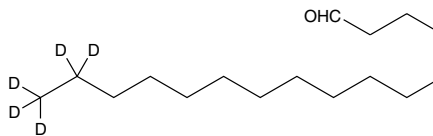
# Product Information



## Hexadecanal-d<sub>5</sub>

Item No. 16834

<b>Formal Name:</b>	hexadecanal-15,15,16,16,16-d <sub>5</sub>
<b>Synonyms:</b>	1-Hexadecanal, Palmitaldehyde
<b>MF:</b>	C <sub>16</sub> H <sub>25</sub> D <sub>5</sub> O
<b>FW:</b>	243.4
<b>Chemical Purity:</b>	≥96% Hexadecanal
<b>Deuterium Incorporation:</b>	≥99% deuterated forms (d <sub>1</sub> -d <sub>5</sub> ); ≤1% d <sub>0</sub>
<b>Stability:</b>	≥1 year at -20°C
<b>Supplied as:</b>	A solution in methyl acetate



### Laboratory Procedures

Hexadecanal-d<sub>5</sub> 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-d<sub>5</sub> be stored as supplied at -20°C. It should be stable for at least one year.

Hexadecanal-d<sub>5</sub> 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-d<sub>5</sub> in these solvents is approximately 30 and 10 mg/ml, respectively.

Hexadecanal-d<sub>5</sub> 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.<sup>1</sup> 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.<sup>2,3</sup>

### 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., Oskouiian, 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 Products

For a list of related products please visit: [www.caymanchem.com/catalog/16834](http://www.caymanchem.com/catalog/16834)

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

#### 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 Safety Data Sheet, which has been sent via email to your institution.

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