NBD-C6-Ceramide

For staining of trans-Golgi apparatus in living and fixed cells and following sphingolipid metabolism in cells

Product Description

Name: NBD-C6-Ceramide

N-(NBD-Aminohexanoyl) Sphingosine

6-((N-(7-Nitrobenz-2-oxa-1, 3-diazol-4-

yl)amino)caproyl)sphingosine

Catalog Number: FP-52481A, 1 mg

Structure : $C_{30}H_{49}N_5O_6$ Molecular Weight : MW=575,74

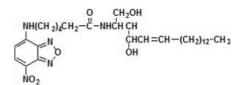
-20°C

Solubility: DMSO, DMF and CH₃OH **Absorption / Emission :** $\lambda_{\text{exc}} (\lambda_{\text{em}} (\text{CH}_3 \text{OH}) = 466/535 \text{nm}$

EC (M⁻¹ cm⁻¹):

Storage:

Protect from light and moisture



Introduction

Ceramides are the biological building blocks of more complex sphingolipids. Metabolism of ceramides typically occurs in Golgi and endoplasmic reticulum membranes.

NBD-ceramide analog used to detect, at the cellular level, a variety of lysosomal storage diseases as well as intracellular distribution and transport of the labeled sphingolipid molecules in living cells.

Directions for use

Guidelines for use

Protocol may be found in the literature.

References

- Cuvillier O, et al. "Involvement of sphingosine in mitochondria-dependent Fas-induced apoptosis of type II jurkat T cells." J Biol. Chem. 275: 15691 (2000).
- Kamishohara M, et al. "Selective accumulation of the endoplasmic reticulum-golgi intermediate compartment induced by the antitumor drug KRN5500." Exp. Cell Res. 256(2): 468-479 (2000)
- **Graf C.** *et al.*, Targeting Ceramide Metabolism with a Potent and Specific Ceramide Kinase Inhibitor, *Mol. Pharmacol.*, 74: 925 932 (2008) Article
- **Gupta V.** *et al.*, Direct quantitative determination of ceramide glycosylation in vivo: a new approach to evaluate cellular enzyme activity of glucosylceramide synthase (GlcT-1), *J. Lipid Res.*, 10.1194/jlr.D002949 (2009) Article
- Lipsky NG, Pagano RE. "A vital stain for the golgi apparatus." Science 228: 745 (1985).
- Lipsky NG, Pagano RE. "Intracellular translocation of fluorescent sphingolipids in cultured fibroblasts: endogenously synthesized sphingomyelin and glucocerebroside analogues pass through the golgi apparatus en route to the plasma membrane." *J Cell Biol.* 100: 27 (1985).
- Pagano RE. "Intracellular processing of lipids: a theory based on studies with fluorescent lipids, liposomes, and cells." Liposome Letters, A.D. Bangham, Ed., pp. 83-96 (1983).
- Pagano RE, Sleight RG. "Defining lipid transport pathways in animal cells." Science 229: 1051 (1985).
- **Torii S.** et al. "Molecular cloning and functional analysis of apoxin I, a snake venom-derived apoptosis-inducing factor with L-amino acid oxidase activity." *Biochemistry* 39(12): 3197-3205 (2000).



FT-52481A

Technical and scientific information

Related / associated products and documents

See BioSciences Innovations catalogue and e-search tool.

NBD C6-HPC, FP-95411A

• NBD C6-Sphingomyelin, JW6710

Ordering information

Catalog size quantities and prices may be found at www.interchim.com/

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