

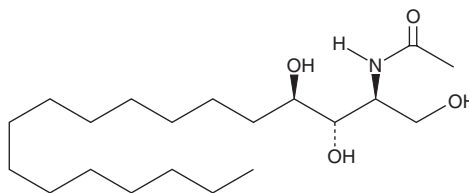
PRODUCT INFORMATION



C2 Phytoceramide (t18:0/2:0)

Item No. 22823

CAS Registry No.: 21830-28-4
Formal Name: N-[(1S,2S,3R)-2,3-dihydroxy-1-(hydroxymethyl)heptadecyl]-acetamide
Synonyms: N-Acetyl Phytosphingosine, C2:0 Phytoceramide, Cer(t18:0/2:0), Ceramide (t18:0/2:0), NAPS
MF: C₂₀H₄₁NO₄
FW: 359.6
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

C2 Phytoceramide (t18:0/2:0) is supplied as a solid. A stock solution may be made by dissolving the C2 phytoceramide (t18:0/2:0) in the solvent of choice. C2 Phytoceramide (t18:0/2:0) is soluble in organic solvents such as ethanol, methanol, and DMSO.

Description

C2 Phytoceramide is a bioactive semisynthetic sphingolipid that inhibits formyl peptide-induced oxidant release (IC₅₀ = 0.38 μM) in suspended polymorphonuclear cells.¹ It increases COX-2 protein levels 15-fold through ERK signaling.² It induces death of keratinocytes (20% viability) with an ED₅₀ value of 30 μM, the same concentration at which 35% of cells in a TUNEL assay are apoptotic. C2 Phytoceramide also has antiproliferative effects in CHO cells, with greater than 80% cytotoxicity achieved at a concentration of 20 μM, and induces internucleosomal DNA fragmentation.³ In addition, it inhibits the activation of phospholipase D (PLD) mediated by muscarinic acetylcholine receptors *in vitro*.

References

1. Nakamura, T., Abe, A., Balazovich, K.J., *et al.* Ceramide regulates oxidant release in adherent human neutrophils. *J. Biol. Chem.* **269**(28), 18384-18389 (1994).
2. Kim, H.J., Shin, W., Park, C.S., *et al.* Differential regulation of cyclooxygenase-2 expression by phytosphingosine derivatives, NAPS and TAPS, and its role in the NAPS or TAPS-mediated apoptosis. *J. Invest. Dermatol.* **121**(5), 1126-1134 (2003).
3. Lee, J.S., Min, D.S., Park, C., *et al.* Phytosphingosine and C2-phytoceramide induce cell death and inhibit carbachol-stimulated phospholipase D activation in Chinese hamster ovary cells expressing the *Caenorhabditis elegans* muscarinic acetylcholine receptor. *FEBS. Lett.* **499**(1-2), 82-86 (2001).

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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