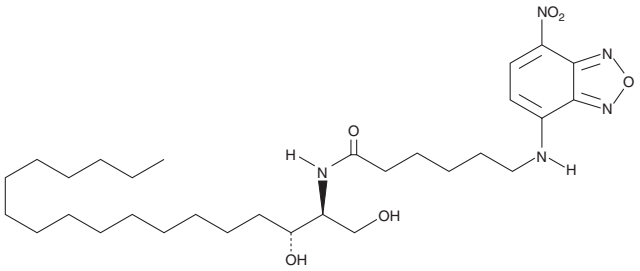
PRODUCT INFORMATION

C6 NBD dihydro Ceramide (d18:0/6:0)

Item No. 10007957

CAS Registry No.: 114301-97-2
Formal Name: N-[(1S,2R)-2-hydroxy-1-(hydroxymethyl) heptadecyl]-6-[(7-nitro-2,1,3-benzoxadiazol-4-yl)amino]-hexanamide
Synonym: NBD Cer(d18:0/6:0, NBD Ceramide (d18:0/6:0), N-C6-NBD-D-*erythro*-dihydro-Sphingosine
MF: $C_{30}H_{51}N_5O_6$
FW: 577.8
Purity: ≥98%
UV/Vis.: λ_{max}: 229, 265, 332, 464 nm
Supplied as: A crystalline 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

C6 NBD dihydro ceramide (d18:0/6:0) is supplied as a crystalline solid. A stock solution may be made by dissolving the C6 NBD dihydro ceramide (d18:0/6:0) in an organic solvent purged with an inert gas. C6 NBD dihydro ceramide (d18:0/6:0) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of C6 NBD dihydro ceramide (d18:0/6:0) in ethanol is approximately 0.5 mg/ml and approximately 20 mg/ml in DMSO and DMF.

If aqueous stock solutions are required for biological experiments, they can best be prepared by diluting the organic solvent into aqueous buffers or isotonic saline. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

C6 NBD ceramide is a biologically active fluorescent analog of short chain, membrane-permeable ceramides. It is as effective as C6 ceramide in the inhibition of viral glycoprotein transport through the Golgi.[1] C6 NBD ceramide has been used as a fluorescent substrate for the activity of UDP-glucose:ceramide glucosyltransferase and to demonstrate the translocation of glucocerebroside and sphingomyelin from the Golgi to the plasma membrane.[2,3] C6 NBD dihydro ceramide (d18:0/6:0) is structurally identical to C6 NBD ceramide, except it contains a saturated bond in the C-4/C-5 position of the sphingosine backbone.

References

1. Rosenwald, A.G. and Pagano, R.E. Inhibition of glycoprotein traffic through the secretory pathway by ceramide. *J. Biol. Chem.* **268(7)**, 4577-4579 (1993).
2. Paul, P., Kamisaka, Y., Marks, D.L., *et al.* Purification and characterization of UDP-glucose: Ceramide glucosyltransferase from rat liver Golgi membranes. *J. Biol. Chem.* **271(4)**, 2287-2293 (1996).
3. Lipsky, N.G. and Pagano, R.E. 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(1)**, 27-34 (1985).

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