

PRODUCT DATA SHEET

L-threo-PPMP

Catalog number: 1868

Common Name: L-threo-1-Phenyl-2-hexadecanoylamino-3-morpholino-1-propanol • HCl

Source: synthetic

Solubility: methanol, ethanol

CAS number: 207278-87-3

Molecular Formula: C₂₉H₅₀N₂O₃ • HCl

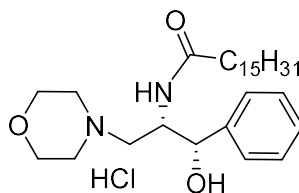
Molecular Weight: 475 + HCl

Storage: -20°C

Purity: TLC >98%

TLC System: chloroform/methanol/acetic acid
(90:10:10 by vol.)

Appearance: solid



Application Notes:

PPMP inhibits glucosylceramide synthesis by blocking the enzyme glucosylceramide synthase. PPMP has activity equivalent to that of the similar inhibitor PDMP when cell homogenates and brain liver microsomes are used, but it is about 20 times more potent when used with intact cells because it is taken up by cells much more effectively than PDMP.¹ It has been suggested that an accumulation of glucosylceramide may cause multidrug-resistance in tumor cells and that PPMP may be useful in reversing or preventing multidrug-resistance by blocking the synthesis of glucosylceramides.² It has recently been found that malaria parasite reproduction can be blocked by PPMP, demonstrating a requirement for glycosylation of ceramide for growth in this organism and a new potential approach for malarial therapy.³ This high purity, stereospecific product is ideal for glycosylation studies *in vitro* and *in vivo*.

Selected References:

1. N. Radin et al. "Improved inhibitors of glucosylceramide synthase" *Journal of Biochemistry*, vol. 111(2) pp. 191-196, 1992
2. P. Xie et al. "Overexpression of glucosylceramide synthase in associated with multidrug resistance of leukemia cells" *Leukemia Research*, vol. 32(3) pp. 475-480, 2008
3. A. Couto et al. "Glycosphingolipids in Plasmodium falciparum. Presence of an active glucosylceramide synthase" *European Journal of Biochemistry*, vol. 271(11) pp. 2204-2214, 2004

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