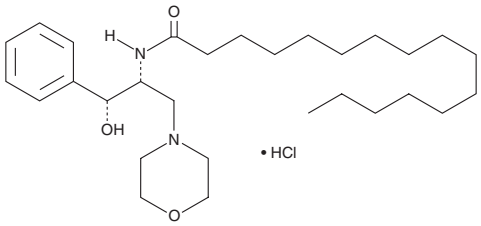
PRODUCT INFORMATION

DL-*threo*-PPMP (hydrochloride)

Item No. 17236

CAS Registry No.:	139974-41-7
Formal Name:	*rel*-N-[(1R,2R)-2-hydroxy-1-(4-morpholinylmethyl)-2-phenylethyl]-hexadecanamide, monohydrochloride
Synonym:	DL-*threo*-1-Phenyl-2-palmitoylamino-3-morpholino-1-propanol
MF:	$C_{29}H_{50}N_2O_3$ • HCl
FW:	511.2
Purity:	≥98%
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

DL-*threo*-PPMP (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the DL-*threo*-PPMP (hydrochloride) in the solvent of choice, which should be purged with an inert gas. DL-*threo*-PPMP (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of DL-*threo*-PPMP (hydrochloride) in these solvents is approximately 10, 20, and 5 mg/ml, respectively.

Description

DL-*threo*-PPMP is a ceramide analog and an inhibitor of glucosylceramide synthase.[1] It inhibits glucosylceramide synthase by 70, 41, and 62% in MDCK cell homogenates, mouse liver microsomes, and mouse brain homogenates, respectively, when used at a concentration of 20 µM. DL-*threo*-PPMP also inhibits sphingomyelin synthase activity in erythrocytes infected with *P. falciparum* and inhibits late ring-stage *P. falciparum* growth (IC_{50} = 0.85 µM).[2] It reduces Akt and ribosomal protein S6 phosphorylation in HEK293 cells and increases autophagy flux in primary mouse neurons.[3]

References

1. Abe, A., Inokuchi, J., Jimbo, M., *et al.* Improved inhibitors of glucosylceramide synthase. *J. Biochem.* **111(2)**, 191-196 (1992).
2. Lauer, S.A., Ghori, N., and Haldar, K. Sphingolipid synthesis as a target for chemotherapy against malaria parasites. *Proc. Natl. Acad. Sci. USA* **92(20)**, 9181-9185 (1995).
3. Shen, W., Henry, A.G., Paumier, K.L., *et al.* Inhibition of glucosylceramide synthase stimulates autophagy flux in neurons. *J. Neurochem.* **129(5)**, 884-894 (2014).

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