Product Data Sheet

Product Name: DL-threo-PPMP (hydrochloride)
Cat. No.: GC15236

Chemical Properties

Cas. No.	139974-41-7		
Chemical Name	*rel*-N-[(1R,2R)-2-hydroxy-1-(4-morpholinylmethyl)-2-phenylethyl]-hexadecanamide, monohydrochloride		
SMILES	O=C(CCCCCCCCCCCCCCC)N[C@H](CN1CCOCC1)[C@H](O)C2=CC=CC=C2.Cl		
Formula	$C_{29}H_{50}N_2O_3$ • HCl	M.Wt	511.2
Solubility	≤10mg/ml in ethanol;20mg/ml in DMSO;5mg/ml in dimethyl formamide	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	DL-threo-PPMP (hydrochloride)		

Background

DL-threo-PPMP (hydrochloride) is an inhibitor of glucosylceramide synthase [1].

Glucosylceramide synthase (GCS) is a pervasive enzyme inherent to intracellular ceramide metabolism. The enzyme has been involved in catalyzing the transfer of glucose to ceramide, which is the principle committed step in glycolipid biosynthesis. GCS has been involved in the cytotoxic response of cancer cells to chemotherapy. Glucosylceramide synthase-based sphingolipids have been identified as important mediators of a variety of cellular functions, including proliferation, differentiation, development, and cell-cell recognition [2].

DL-threo-PPMP was a ceramide analog. DL-threo-PPMP inhibited the activity of glucosylceramide synthase with an IC50 value between 2 and 20 μM. It has been used to study the role of glucosylceramide synthase in cell growth, apoptosis, and autophagy [1].

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References:
[1] Lee L, Abe A, Shayman J A. Improved inhibitors of glucosylceramide synthase[J]. Journal of Biological Chemistry, 1999, 274(21): 14662-14669.
[2] Bleicher R J, Cabot M C. Glucosylceramide synthase and apoptosis[J]. Biochimica et biophysica Acta (BBA)-Molecular and Cell Biology of Lipids, 2002, 1585(2): 172-178.

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