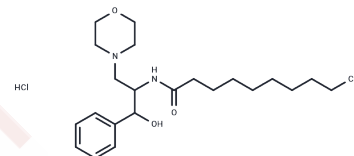


## PDMP hydrochloride

## Chemical Properties

CAS No. :	73257-80-4
Formula:	C <sub>23</sub> H <sub>39</sub> ClN <sub>2</sub> O <sub>3</sub>
Molecular Weight:	427.03
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



## Biological Description

Description	PDMP hydrochloride is a ceramide analog originally developed as an inhibitor of glucosylceramide synthase that contains four stereoisomers due to two adjacent chiral centers, and while total PDMP hydrochloride inhibits glucosylceramide synthase by approximately 90% at 0.8 μM in MDCK cell homogenates, the inhibitory activity resides in the D-threo (1R,2R) enantiomer, which also blocks β-1,4-galactosyltransferase 6, prevents lactosylceramide-driven neuroinflammation in experimental autoimmune encephalomyelitis, additionally, PDMP hydrochloride enhances curcumin-induced antiproliferative and pro-apoptotic effects in melanoma cells.
Targets(IC50)	Transferase
In vitro	In experimental assays utilizing human Acute Myeloid Leukemia (AML) cells, PDMP hydrochloride was applied at concentrations ranging from 10 to 25 μM in combination with the BCL-2 inhibitor ABT-737. This treatment regimen effectively sensitized the cells to ABT-737-induced cytotoxicity, resulting in enhanced mitochondrial apoptosis [1].

## Solubility Information

Solubility	DMF: 25 mg/mL (58.54 mM),Sonication is recommended. Ethanol:PBS(pH 7.2)(1:5): 0.05 mg/mL (0.12 mM),Sonication is recommended. DMSO: 24 mg/mL (56.2 mM),Sonication is recommended. Ethanol: 50 mg/mL (117.09 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	2.3418 mL	11.7088 mL	23.4176 mL
5 mM	0.4684 mL	2.3418 mL	4.6835 mL
10 mM	0.2342 mL	1.1709 mL	2.3418 mL
50 mM	0.0468 mL	0.2342 mL	0.4684 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Casson L, et al. Inhibition of ceramide metabolism sensitizes human leukemia cells to inhibition of BCL2-like proteins. PLoS One. 2013;8(1):e54525.

Yin L, et al. Effect of PDMP, a glucosylceramide synthase inhibitor, on reversion of daunorubicin resistance in human leukemia cell line K562/A02. Zhongguo Shi Yan Xue Ye Xue Za Zhi. 2010 Feb;18(1):79-84.

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