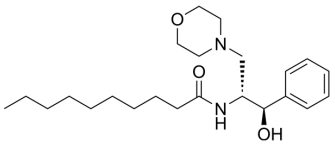
D-threo-PDMP

Cat. No.:	HY-116392E
CAS No.:	109836-82-0
Molecular Formula:	$C_{23}H_{38}N_2O_3$
Molecular Weight:	390.56
Target:	Glucosylceramide Synthase (GCS)
Pathway:	Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	D-threo-PDMP is a potent glucoceramide synthase (GCS) inhibitor, which reduces the glycosphingolipids on the cell surface by inhibiting glycosylation, reduces the total length of the axon plexus and the number of axon branch points, and inhibits neurite growth[1][2].
In Vitro	D-threo-PDMP pretreatment of hepatocytes eliminates the stimulation of glycosphingolipid levels by TNF-α (280 ng/mL) and enhances ceramide production[1]. D-threo-PDMP(20 μM, 48 h) significantly stimulates the proliferation of tethered glomerular mesangial cells (GMC), and these increases are significantly attenuated in a dose-dependent manner by exogenous ganglioside mixtures (0.1-0.2 mg/ml) or GM3 (20-100 μM). It also induced a significant decrease in ganglioside expression[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Carmen García-Ruiz, et al. Defective TNF-alpha-mediated hepatocellular apoptosis and liver damage in acidic sphingomyelinase knockout mice. J Clin Invest. 2003 Jan;111(2):197-208.

[2]. Dong Hoon Kwak, et al. Ganglioside GM3 inhibits the high glucose- and TGF-beta1-induced proliferation of rat glomerular mesangial cells. Life Sci. 2005 Sep 30;77(20):2540-51.

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