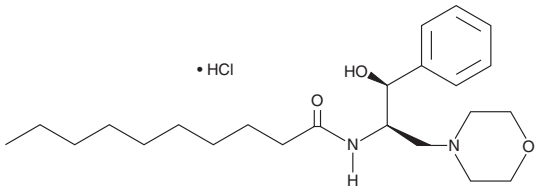
PRODUCT INFORMATION

DL-*erythro*-PDMP (hydrochloride)

Item No. 22676

CAS Registry No.: 80943-40-4
Formal Name: *rel*-N-[(1R,2S)-2-hydroxy-1-(4-morpholinylmethyl)-2-phenylethyl]-decanamide, monohydrochloride
MF: $C_{23}H_{38}N_2O_3 \bullet HCl$
FW: 427.0
Purity: ≥98%
Supplied as: A 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-*erythro*-PDMP (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the DL-*erythro*-PDMP (hydrochloride) in the solvent of choice, which should be purged with an inert gas. DL-*erythro*-PDMP (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of DL-*erythro*-PDMP (hydrochloride) in these solvents is approximately 50, 30, and 25 mg/ml, respectively.

DL-*erythro*-PDMP (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, DL-*erythro*-PDMP (hydrochloride) should be first dissolved in ethanol and then diluted with the aqueous buffer of choice. DL-*erythro*-PDMP (hydrochloride) has a solubility of approximately 0.05 mg/ml in a 1:5 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

DL-*erythro*-PDMP is a mixture of ceramide analogs that contains two of the four possible stereoisomers of PDMP (Item No. 62595): D-*erythro*-(1S,2R)-PDMP and L-*erythro*-(1R,2S)-PDMP.[1,2] It protects glucosylceramide (GlcCer) synthase from degradation and increases the level of ceramide in MDCK cells when used at a concentration of 40 µM.[2] Unlike DL-*threo*-PDMP, DL-*erythro*-PDMP does not inhibit GlcCer synthase, but it does inhibit UDP galactose:ceramide galactosyltransferase by 27% in mouse brain microsomes when used at a concentration of 100 µM.[3] It inhibits the growth of isolated rabbit skin fibroblasts when used at a concentration of 50 µM but is cytotoxic at concentrations higher than 50 µM.[4]

References

1. Vunnam, R.R. and Radin, N.S. Analogs of ceramide that inhibit glucocerebroside synthetase in mouse brain. *Chem. Phys. Lipids* **26(3)**, 265-278 (1980).
2. Abe, A., Radin, N.S., and Shayman, J.A. Induction of glucosylceramide synthase by synthase inhibitors and ceramide. *Biochim. Biophys. Acta*. **1299(3)**, 333-341 (1996).
3. Inokuchi, J.i. and Radin, N.S. Preparation of the active isomer of 1-phenyl-2-decanoylamino-3-morpholino-1-propanol, inhibitor of murine glucocerebroside synthetase. *J. Lipid Res*. **28(5)**, 565-571 (1987).
4. Uemura, K., Sugiyama, E., Tamai, C., *et al*. Effect of an inhibitor of glucosylceramide synthesis on cultured rabbit skin fibroblasts. *J. Biochem*. **108(4)**, 525-530 (1990).

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