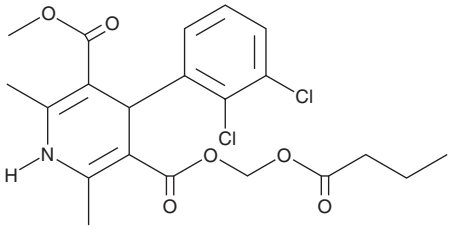
PRODUCT INFORMATION

Clevidipine

Item No. 23025

CAS Registry No.:	167221-71-8
Formal Name:	4-(2,3-dichlorophenyl)-1,4-dihydro-2,6-dimethyl-3,5-pyridinedicarboxylic acid, 3-methyl 5-[(1-oxobutoxy)methyl] ester
Synonym:	*rac*-Clevidipine
MF:	$C_{21}H_{23}Cl_2NO_6$
FW:	456.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 239, 363 nm
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

Clevidipine is supplied as a crystalline solid. A stock solution may be made by dissolving the clevidipine in the solvent of choice. Clevidipine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of clevidipine in ethanol is approximately 20 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Clevidipine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, clevidipine should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Clevidipine has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Clevidipine is an inhibitor of L-type calcium channels (IC_{50}s = 7.1 and 78.8 nM at -40 and -80 mV, respectively, in isolated guinea pig cardiomyocytes).[1] It preferentially inhibits L-type calcium channels in isolated rat portal vein over rat left ventricle (IC_{50}s = 427 and 20,417 nM, respectively).[2] Clevidipine decreases mean arterial pressure in anesthetized normotensive or spontaneously hypertensive rats with ED_{30} values of 316 and 58 nmol/kg, respectively. Formulations containing clevidipine have been used in the treatment of hypertension.

References

1. Yi, X., Vivien, B., and Lynch, C., III Clevidipine blockade of L-type Ca^{2+} currents: Steady-state and kinetic electrophysiological studies in guinea pig ventricular myocytes. *J. Cardiovasc. Pharmacol.* **36(5)**, 592-600 (2000).
2. Norlander, M., Sjöquist, P.O., Ericsson, H., *et al.* Pharmacodynamic, pharmacokinetic and clinical effects of clevidipine, an ultrashort-acting calcium antagonist for rapid blood pressure control. *Cardiovasc. Drugs Ther.* **22(3)** (2004).

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