

Clevidipine

Catalog No: tcsc1427



Available Sizes

Size: 10mg

Size: 50mg

Size: 100mg



Specifications

CAS No:

167221-71-8

Formula:

$C_{21}H_{23}Cl_2NO_6$

Pathway:

Membrane Transporter/Ion Channel

Target:

Calcium Channel

Purity / Grade:

>98%

Solubility:

DMSO : ≥ 50 mg/mL (109.57 mM)

Observed Molecular Weight:

456.32

Product Description

Clevidipine is a short-acting dihydropyridine calcium channel antagonist (IC₅₀= 7.1 nM, V(H) = -40 mV) under development for treatment of perioperative hypertension.

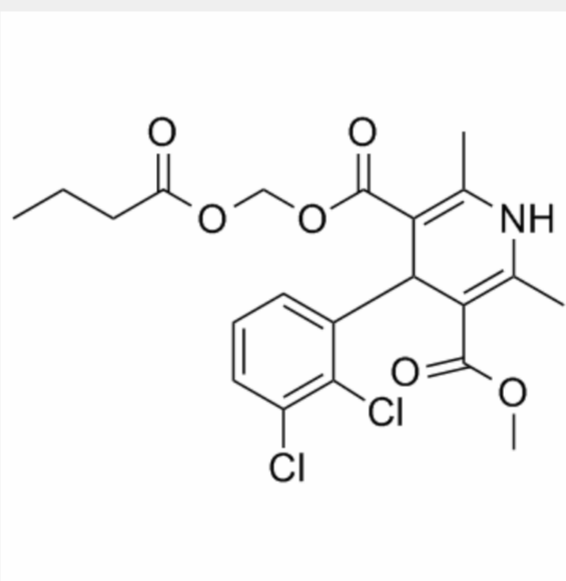
IC50 Value: 7.1 nM at V(H) = -40 mV [1]

Target: calcium channel

in vitro: Both clevidipine and nitroglycerin completely reversed U46619-induced contraction (clevidipine (50% effective concentration [EC50] = $3.88 \pm 0.84 \times 10^{-6}$ mol/L, nitroglycerin EC50 = $4.84 \pm 2.76 \times 10^{-8}$ mol/L) [2]. A decrease in temperature increased the half-life of clevidipine in blood, whereas dilution of the blood did not affect the in vitro half-life of clevidipine. The albumin concentration affected the hydrolysis rate of clevidipine in RBC suspended with saline [3].

in vivo: Clevidipine is a high-clearance drug with a relatively small volume of distribution, resulting in an extremely short half-life in all species studied. The median initial half-life of the individual value (Bayesian estimates) is 12, 20, and 22 s in the rabbit, rat, and dog, respectively [4]. The extremely high clearance value and the small volume of distribution resulted in short half-lives of clevidipine, 2.2 and 16.8 min, respectively. The blood concentration and dose rate producing half the maximal effect (i.e. EC50 and ED50) were approximately 25 nM and 1.5 microg/kg/min, respectively [5].

Clinical trial: CARVE: Clevidipine for Vasoreactivity Evaluation of the Pulmonary Arterial Bed. Phase 4



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!