Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

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.

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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 +/- 0.84 x 10(-6) mol/L, nitroglycerin EC50 = 4.84 +/- 2.76 x 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