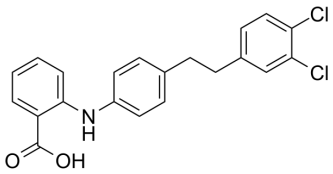
PD-118057

Cat. No.:	HY-108594
CAS No.:	313674-97-4
Molecular Formula:	$C_{21}H_{17}Cl_2NO_2$
Molecular Weight:	386.27
Target:	Potassium Channel
Pathway:	Membrane Transporter/Ion Channel
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (258.89 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.5889 mL	12.9443 mL	25.8886 mL
	5 mM	0.5178 mL	2.5889 mL	5.1777 mL
	10 mM	0.2589 mL	1.2944 mL	2.5889 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.47 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

PD-118057 is a hERG channel activator without causing hERG blockade. PD-118057 activates hERG channel to suppress changes in membrane excitability[1][2].

IC_{50} & Target

Human ether-a-go-go-related gene channel[1]

In Vitro

PD-118057 (3 μM and 10 μM) specifically increases hERG current and inhibits action potential duration in guinea pig ventricular muscle in acute isolation of guinea pig cardiomyocytes[2][3].
PD-118057 (10 μM) reverses the current inhibition induced by Dof and Mox without changing the "hump" shape of I_{Kr} current recorded by action potential clamp, and only slightly increases the peak value of the suppressed current[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Yeung SY, et al. Pharmacological and biophysical isolation of K+ currents encoded by ether-à-go-go-related genes in murine hepatic portal vein smooth muscle cells. Am J Physiol Cell Physiol. 2007 Jan;292(1):C468-76.

[2]. Meng J, et al. Effect of PD-118057attenuates hypokalaemia or drug-induced prolongation of action potential duration in guinea pig ventricular myocytes. 2014,29(05):536-538.

[3]. Mao H, et al. Pharmacologic Approach to Defective Protein Trafficking in the E637K-hERG Mutant with PD-118057 and Thapsigargin. PLoS One. 2013 Jun 19;8(6):e65481.

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