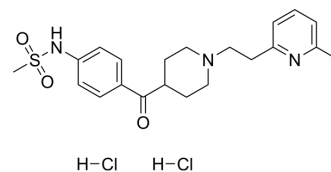


E-4031

Cat. No.:	HY-15551
CAS No.:	113559-13-0
Molecular Formula:	C ₂₁ H ₂₉ Cl ₂ N ₃ O ₃ S
Molecular Weight:	474.44
Target:	Potassium Channel
Pathway:	Membrane Transporter/Ion Channel
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 2 years; -20°C, 1 year (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro	H ₂ O : ≥ 50 mg/mL (105.39 mM) * "≥" means soluble, but saturation unknown.					
		Solvent Concentration	Mass	1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM		2.1077 mL	10.5387 mL	21.0775 mL
		5 mM		0.4215 mL	2.1077 mL	4.2155 mL
		10 mM		0.2108 mL	1.0539 mL	2.1077 mL
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: PBS Solubility: 100 mg/mL (210.77 mM); Clear solution; Need ultrasonic					

BIOLOGICAL ACTIVITY

Description	E-4031 is a selective hERG potassium channel blocker for use in class III anti-arrhythmic studies ^[1] .
In Vitro	E-4031 (0.1-10 μM) significantly depolarises the maximum diastolic potential (MDP) and prolongs the action charge that depolarises MDP from -58.8±0.9 to -24.5±1.8 mV at 1 μM and from -58.2±2.1 to -19.6±1.8 mV at 10 μM in single SAN cells of New Zealand albino rabbits ^[2] . ?E-4031 (0.1-10 μM) can block part of the outward current during the depolarisation step as well as the tail current (I _{TD}) during subsequent repolarization in a dose-dependent manner, and depresses I _{TD} by 88 % at 10 μM in single SAN cells of New Zealand albino rabbits ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- ACS Appl Mater Interfaces. 2023 Mar 29.
- Biofabrication. 2022 Oct 4.
- Toxicol Appl Pharmacol. 2021 Sep 27;115731.

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REFERENCES

[1]. Daisuke Izumi, et al. Effects of bepridil versus E-4031 on transmural ventricular repolarization and inducibility of ventricular tachyarrhythmias in the dog. Pacing Clin Electrophysiol. 2010 Aug;33(8):950-9.

[2]. E E Verheijck, et al. Effects of delayed rectifier current blockade by E-4031 on impulse generation in single sinoatrial nodal myocytes of the rabbit. Circ Res. 1995 Apr;76(4):607-15.

Caution: Product has not been fully validated for medical applications. For research use only.

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