Cilobradine hydrochloride

Cat. No.: HY-18940A

CAS No.: 186097-54-1

Molecular Formula: $C_{28}H_{39}ClN_2O_5$

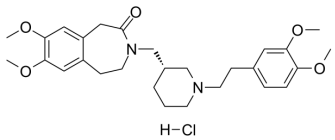
Molecular Weight: 519.07

Target: HCN Channel

Pathway: Membrane Transporter/Ion Channel

Storage: 4°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 125 mg/mL (240.82 mM)

H_2O : 100 mg/mL (192.65 mM; Need ultrasonic)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.9265 mL	9.6326 mL	19.2652 mL
5 mM	0.3853 mL	1.9265 mL	3.8530 mL
10 mM	0.1927 mL	0.9633 mL	1.9265 mL

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

BIOLOGICAL ACTIVITY

Description

Cilobradine is an HCN Channel blocker; an open channel blocker of neuronal Ih and related cardiac If channels.Target: HCN Channel blockerCilobradine is a HCN channel blocker that is about 3 times more potent than ZD7288. At a concentration of 10 μM, Cilobradine inhibits WT mHCN2 channel current by 86 ± 2% (n = 5). In contrast, I432A and A425G channel currents were only reduced by 14 ± 1% (n = 4) and 19 ± 2% (n = 8), respectively, by this concentration of Cilobradine. The double mutant (I432A/A425G) channel was even less sensitive to 10 μM Cilobradine (8 ± 2% inhibition; n = 4).

REFERENCES

[1]. Cheng L, et al. Molecular mapping of the binding site for a blocker of hyperpolarization-activated, cyclic nucleotide-modulated pacemaker channels. J Pharmacol Exp Ther. 2007 Sep;322(3):931-939.

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

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