AMTB hydrochloride

Cat. No.: HY-100345

CAS No.: 926023-82-7

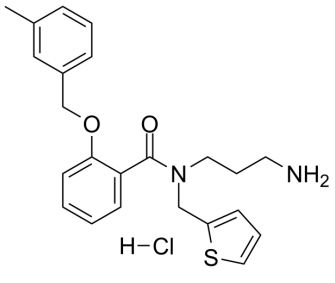
Molecular Formula: $C_{23}H_{27}ClN_2O_2S$

Molecular Weight: 430.99

Target: TRP Channel

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling

Storage: 4°C, sealed storage, away from moisture and light
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (232.02 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.3202 mL	11.6012 mL	23.2024 mL
	5 mM	0.4640 mL	2.3202 mL	4.6405 mL
	10 mM	0.2320 mL	1.1601 mL	2.3202 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (5.80 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (5.80 mM); Clear solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.80 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

AMTB hydrochloride is a selective TRPM8 channel blocker. AMTB hydrochloride inhibits icilin-induced TRPM8 channel activation with a pIC_{50} of 6.23. AMTB hydrochloride can be used for the research of the overactive bladder and painful bladder syndrome. AMTB hydrochloride is a non-selective inhibitor of voltage-gated sodium channels (Na_V)[1][2].

In Vitro

AMTB hydrochloride blocks veratridine-induced membrane potential changes at each NaV1 isoform (pIC_{50}s ranging 4.83-5.69 for $Na_V1.1$- $Na_V1.8$)[2].
AMTB hydrochloride decreases viable cell number in MDA-MB-231 and SK-BR-3 breast cancer cell lines (30 and 100 μM), and also reduces the migration of MDA-MB-231 cells (30 μM)[2].

	MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	In the anesthetized rat, AMTB (3 mg/kg; intravenous) hydrochloride decreases the frequency of volume-induced bladder contractions, without reducing the amplitude of contraction[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Lashinger ES, et al. AMTB, a TRPM8 channel blocker: evidence in rats for activity in overactive bladder and painful bladder syndrome. Am J Physiol Renal Physiol. 2008;295(3):F803-F810.

[2]. Yapa KTDS, et al. Assessment of the TRPM8 inhibitor AMTB in breast cancer cells and its identification as an inhibitor of voltage gated sodium channels. Life Sci. 2018;198:128-135.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA