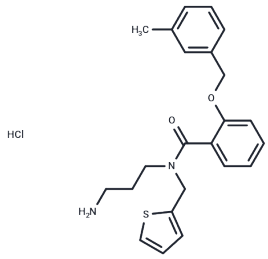
Data Sheet (Cat.No.T19723)

TargetMol

AMTB hydrochloride

Chemical Properties



CAS No. :	926023-82-7
Formula:	C23H27ClN2O2S
Molecular Weight:	430.99
Storage:	Powder: -20°C for 3 years | In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.

Biological Description

Description	AMTB hydrochloride (AMTB HCl) is a novel TRPM8 channel blocker and is effective for pain and urinary diseases. AMTB can act on the bladder afferent pathway to attenuate the bladder micturition reflex and nociceptive reflex responses in the rat.
Targets(IC50)	TRP/TRPV Channel
In vivo	For rats, AMTB (10 mg/kg) significantly attenuated reflex responses to noxious urinary bladder distension (UBD) to 5.42 and 56.51% of the maximal visceromotor reflex (VMR) response and pressor response, respectively. The ID50 value on VMR response was 2.42 +/- 0.46 mg/kg [1].

Solubility Information

Solubility	DMSO: 60 mg/mL (139.21 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (4.64 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3202 mL	11.6012 mL	23.2024 mL
5 mM	0.464 mL	2.3202 mL	4.6405 mL
10 mM	0.232 mL	1.1601 mL	2.3202 mL
50 mM	0.0464 mL	0.232 mL	0.464 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Lin AH, Liu MH, Ko HB, Perng DW, Lee TS, Kou YR. Inflammatory Effects of Menthol vs. Non-menthol Cigarette Smoke Extract on Human Lung Epithelial Cells: A Double-Hit on TRPM8 by Reactive Oxygen Species and Menthol. Front Physiol. 2017 Apr 27;8:263. doi: 10.3389/fphys.2017.00263. eCollection 2017. PubMed PMID: 28496415; PubMed Central PMCID: PMC5406458.

Kobayashi JI, Hirasawa H, Ozawa T, Ozawa T, Takeda H, Fujimori Y, Nakanishi O, Kamada N, Ikeda T. Synthesis and optimization of novel α-phenylglycinamides as selective TRPM8 antagonists. Bioorg Med Chem. 2017 Jan 15;25(2): 727-742. doi: 10.1016/j.bmc.2016.11.049. Epub 2016 Nov 30. PubMed PMID: 27964995.

Pan Y, Chen F, Huang S, Cai Z, Lan H, Tong Y, Yu X, Zhao G. TRPA1 and TRPM8 Receptors May Promote Local Vasodilation that Aggravates Oxaliplatin-Induced Peripheral Neuropathy Amenable to 17β-Estradiol Treatment. Curr Neurovasc Res. 2016;13(4):309-317. PubMed PMID: 27262300.

Melanaphy D, Johnson CD, Kustov MV, Watson CA, Borysova L, Burdyga TV, Zholos AV. Ion channel mechanisms of rat tail artery contraction-relaxation by menthol involving, respectively, TRPM8 activation and L-type Ca2+ channel inhibition. Am J Physiol Heart Circ Physiol. 2016 Dec 1;311(6):H1416-H1430. doi: 10.1152/ajpheart.00222.2015. Epub 2016 Oct 7. PubMed PMID: 27765744; PubMed Central PMCID: PMC5206336.