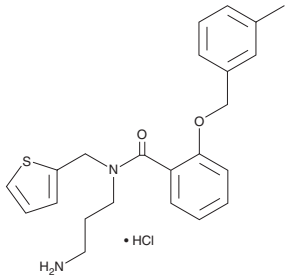
PRODUCT INFORMATION

AMTB

Item No. 25336

CAS Registry No.:	926023-82-7
Formal Name:	N-(3-aminopropyl)-2-[(3-methylphenyl) methoxy]-N-(2-thienylmethyl)-benzamide, monohydrochloride
MF:	$C_{23}H_{26}N_2O_2S \bullet HCl$
FW:	431.0
Purity:	≥98%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

AMTB is supplied as a solid. A stock solution may be made by dissolving the AMTB in the solvent of choice. AMTB is soluble in the organic solvent DMSO, which should be purged with an inert gas. It is also soluble in water. The solubility of AMTB in DMSO and water is approximately 100 mM. We do not recommend storing the aqueous solution for more than one day.

Description

AMTB is an antagonist of transient receptor potential melastatin 8 (TRPM8).[1] It inhibits calcium influx induced by the TRPM8 agonist icilin (Item No. 10137) with an IC_{50} value of 0.58 µM. AMTB (3 mg/kg) decreases the number of volume-induced bladder contractions in a rat model of noxious bladder distension. It also decreases the visceromotor reflex response to urinary bladder distension (ID_{50} = 2.42 mg/kg), indicating antinociceptive activity. AMTB inhibits the sodium channel (Na_v) isoforms Na_v1.1-1.8 (IC_{50}s = 2-14.8 µM) and decreases viability of MDA-MB-231 and SK-BR-3 breast cancer cells (IC_{50}s = ~23.7 and 17.3 µM, respectively) in a TRPM8-independent manner.[2]

References

1. Lashinger, E.S.R., Steiginga, M.S., Hieble, J.P., *et al.* AMTB, a TRPM8 channel blocker: Evidence in rats for activity in overactive bladder and painful bladder syndrome. *Am. J. Physiol. Renal Physiol.* **295(3)**, F803-F810 (2008).
2. Yapa, K.T.D.S., Deuis, J., Peters, A.A., *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.* **198**, 128-135 (2018).

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