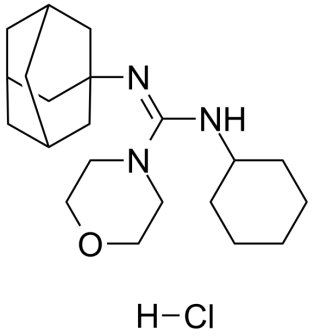
PNU 37883 hydrochloride

Cat. No.:	HY-108589
CAS No.:	57568-80-6
Molecular Formula:	$C_{21}H_{36}ClN_3O$
Molecular Weight:	381.98
Target:	Potassium Channel
Pathway:	Membrane Transporter/Ion Channel
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	PNU 37883 hydrochloride (PNU 37883A) is a selective vascular ATP-sensitive potassium (Kir6, K_{ATP}) channels blocker. PNU 37883 hydrochloride has diuretic effects with specific binding in kidney and vascular smooth muscle rather than in brain or pancreatic beta cells[1][2].
In Vitro	In HEK-293 cells stably expressing Kir6.2/SUR1, Kir6.2/SUR2A, Kir6.2/SUR2B or Kir6.1/SUR2B, PNU-37883A inhibits four types of KATP channels, but to different extents. Inhibition of the putative smooth muscle KATP channel types, Kir6.2/SUR2B (IC50 of 15 μM) and Kir6.1/SUR2B (IC50 of 6 μM). PNU-37883A significantly inhibits currents generated by expressing Kir6.2Δ26 alone, with an IC50 of 5 μM, which was significantly increased to 38 μM when Kir6.2Δ26 is expressed with SUR2B[1]. PNU 37883 (0.1-10 nM) hydrochloride produces a concentration-dependent attenuation of the relaxation of agmatine (100 μM) in phenylephrine- or KCl- precontracted aortic rings. However, treatment with PNU 37883 (10 nM) hydrochloride alone does not modify the vascular tone[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Yi Cui, et al. Different molecular sites of action for the KATP channel inhibitors, PNU-99963 and PNU-37883A. Br J Pharmacol. 2003 May;139(1):122-8.

[2]. Noriyoshi Teramoto. Pharmacological Profile of U-37883A, a Channel Blocker of Smooth Muscle-Type ATP-Sensitive K Channels. Cardiovasc Drug Rev. Spring 2006;24(1):25-32.

[3]. Guang-Yuan Mar, et al. Changes of imidazoline receptors in spontaneously hypertensive rats. Int J Exp Pathol. 2013 Feb;94(1):17-24.

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