

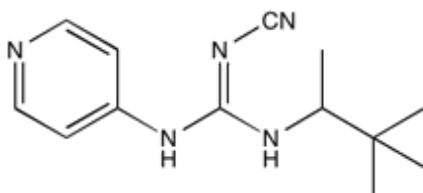
Catalog # 10-2856

Pinacidil

CAS# 85371-64-8

(+/-)-N-Cyano-N'-4-pyridinyl-Nα-(1,2,2-trimethylpropyl)guanidine monohydrate

Lot # X101221



Activates ATP-dependent potassium channels.^{1,2} Induces vascular relaxation and antihypertensive effects.³ Prevents the loss of mitochondrial inner membrane potential, protecting cerebellar granule neurons from apoptosis induced by oxidative stress.⁴ Displays protective effects in Parkinson's disease models⁵ and cerebral ischemia-reperfusion⁶.

- 1) Hermesmeyer *et al.* (1988), *Pinacidil actions on ion channels in vascular muscle*; J. Cardiovasc. Pharmacol., **12(Suppl. 2)** S17
- 2) Gollasch *et al.* (1995), *Pinacidil relaxes porcine and human coronary arteries by activating ATP-dependent potassium channels in smooth muscle cells*; J. Pharmacol. Exp. Therap., **275** 681
- 3) Cohen & Kurz (1988), *Pinacidil-induced vascular relaxation: comparison to other vasodilators and to classical mechanisms of vasodilation*; J. Cardiovasc. Pharmacol., **12(Suppl. 2)** S5
- 4) Teshima *et al.* (2003), *Mitochondrial ATP-sensitive potassium channel activation protects cerebellar granule neurons from apoptosis induced by oxidative stress*; Stroke, **34** 1796
- 5) Xie *et al.* (2010), *K(ATP) channel openers protect mesencephalic neurons against MPP+-induced cytotoxicity via inhibition of ROS production*; J. Neurosci. Res., **88** 428
- 6) Zhang *et al.* (2008), *Effects of ATP sensitive potassium channel opener on the mRNA and protein expressions of caspase-12 after cerebral ischemia-reperfusion in rats*; Neurosci. Bull., **24** 7

PHYSICAL DATA

Molecular Weight:	263.34
Molecular Formula:	C ₁₃ H ₁₉ N ₅ · H ₂ O
Purity:	98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (up to 25 mg/ml with warming) or Ethanol (up to 25 mg/ml with warming)
Physical Description:	Pink solid
Storage and Stability:	Store as supplied at room temperature for up to 1 year from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 2 months.

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