

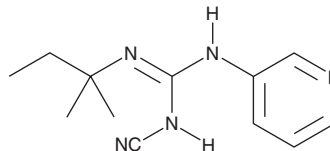
PRODUCT INFORMATION



P1075

Item No. 21849

CAS Registry No.: 60559-98-0
Formal Name: N-cyano-N'-(1,1-dimethylpropyl)-N''-3-pyridinyl-guanidine
MF: $C_{12}H_{17}N_5$
FW: 231.3
Purity: $\geq 98\%$
UV/Vis.: λ_{max} : 239 nm
Supplied as: A crystalline 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

P1075 is supplied as a crystalline solid. A stock solution may be made by dissolving the P1075 in the solvent of choice. P1075 is soluble in organic solvents such as ethanol and DMSO, which should be purged with an inert gas. The solubility of P1075 in these solvents is up to approximately 50 and 100 mM, respectively.

Description

P1075 is a potent activator of sulfonylurea receptor 2-associated ATP-sensitive potassium channels (SUR2- $K_{ir}6$) with an EC_{50} value of 45 nM for SUR2B- $K_{ir}6$ channel activation.¹ It is highly selective for SUR2 over SUR1 isoforms ($IC_{50}S = 9\text{-}46$ nM and 1.02 mM, respectively, in a radioligand binding assay). P1075 increases outflow facility, a marker of reduced intraocular pressure, in human eye anterior segments *ex vivo*.² It also reduces infarct size in isolated rabbit hearts *via* activation of mitochondrial ATP-sensitive potassium channels (K_{ATP} ; $EC_{50}S = 60\text{-}90$ nM).³

References

- Schwanstecher, M., Sieverding, C., Dörschner, H., *et al.* Potassium channel openers require ATP to bind to and act through sulfonylurea receptors. *EMBO J.* **17**(19), 5529-5535 (1998).
- Chowdhury, U.R., Bahler, C.K., Hann, C.R., *et al.* ATP-sensitive potassium (K_{ATP}) channel activation decreases intraocular pressure in the anterior chamber of the eye. *Invest. Ophthalmol. Vis. Sci.* **52**(9), 6435-6442 (2011).
- Oldenburg, O., Yang, X.M., Krieg, T., *et al.* P1075 opens mitochondrial K_{ATP} channels and generates reactive oxygen species resulting in cardioprotection of rabbit hearts. *J. Mol. Cell. Cardiol.* **35**(9), 1035-1042 (2003).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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