PRODUCT INFORMATION

Pinacidil (hydrate)
Item No. 15416

CAS Registry No.: 85371-64-8
Formal Name: N-cyano-N'-4-pyridinyl-N'-(1,2,2-trimethylpropyl)-guanidine, monohydrate
MF: C_{13}H_{19}N_5 • H_2O
FW: 263.4
Purity: ≥98%
UV/Vis.: λ_{max}: 258 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly

Laboratory Procedures

Pinacidil (hydrate) is supplied as a crystalline solid. A stock solution may be made by dissolving the pinacidil (hydrate) in the solvent of choice. Pinacidil (hydrate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of pinacidil (hydrate) in these solvents is approximately 20, 10, and 15 mg/ml, respectively.

Pinacidil (hydrate) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, pinacidil (hydrate) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Pinacidil (hydrate) has a solubility of approximately 0.1 mg/ml in a 1:8 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Pinacidil is a cyanoguanidine compound that acts as a potassium channel opener, activating the ATP-modulated potassium channels of guinea pig bladder and heart with K_i values of 104 and 251 nM, respectively.\(^1\)\(^-\)\(^3\) It completely relaxes coronary artery rings preconstricted with serotonin (Item No. 14332; IC_{50} = 1.26 µM).\(^4\) Through this mechanism, pinacidil causes vascular relaxation, decreases peripheral vascular resistance, and reduces hypertension in animals and humans.\(^5\),\(^6\)

References