



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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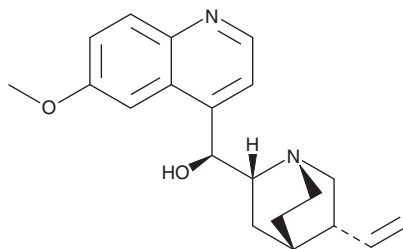
# PRODUCT INFORMATION



## Quinidine

Item No. 20356

<b>CAS Registry No.:</b>	56-54-2
<b>Formal Name:</b>	6'-methoxy-cinchonan-9S-ol
<b>Synonyms:</b>	(+)-Quinidine, $\beta$ -Quinidine
<b>MF:</b>	$C_{20}H_{24}N_2O_2$
<b>FW:</b>	324.4
<b>Purity:</b>	$\geq 95\%$ (may contain up to 15% hydroquinidine)
<b>UV/Vis.:</b>	$\lambda_{max}$ : 232, 280, 334 nm
<b>Supplied as:</b>	A crystalline solid
<b>Storage:</b>	-20°C
<b>Stability:</b>	$\geq 2$ years



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

### Laboratory Procedures

Quinidine is supplied as a crystalline solid. A stock solution may be made by dissolving the quinidine in the solvent of choice, which should be purged with an inert gas. Quinidine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of quinidine in these solvents is approximately 1, 25, and 30 mg/ml, respectively.

Quinidine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, quinidine should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Quinidine has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Quinidine is a stereoisomer of the antimalarial agent quinine (Item No. 23958) and a class Ia antiarrhythmic agent.<sup>1,2</sup> Quinidine blocks the voltage-gated sodium ( $Na_v$ ) channel  $Na_v1.5$  in a use-dependent manner.<sup>1</sup> It decreases the amplitude and duration of action potentials in isolated canine ventricular myocytes.<sup>3</sup> It inhibits  $K_{Kr}$ , peak  $I_{Na}$ , and late  $I_{Na}$  ( $IC_{50}$ s = 4.5, 11, and 12  $\mu$ M, respectively) and can induce torsade de pointes in isolated rabbit hearts when used at a concentration of 1  $\mu$ M.<sup>2</sup> Quinidine induces QT prolongation in dogs.<sup>4</sup> It also binds to  $M_2$  muscarinic acetylcholine receptors ( $K_i$  = 7.5  $\mu$ M for human recombinant receptors expressed in HM2-B10 cells).<sup>5</sup> Formulations containing quinidine have been used in the treatment of atrial fibrillation and ventricular arrhythmias.

### References

1. Roden, D.M. *Card. Electrophysiol. Clin.* **6(4)**, 695-704 (2014).
2. Wu, L., Guo, D., Li, H., et al. *Heart Rhythm* **5(12)**, 1726-1734 (2008).
3. Salata, J.J. and Wasserstrom, J.A. *Circ. Res.* **62(2)**, 324-337 (1988).
4. Rakhit, A., Guentert, T.W., Holford, N.H.G., et al. *Eur. J. Drug Metab. Pharmacokinet.* **9(4)**, 315-324 (1984).
5. Kovacs, I., Yamamura, H.I., Waite, S.L., et al. *J. Pharmacol. Exp. Ther.* **284(2)**, 500-507 (1998).

#### 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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