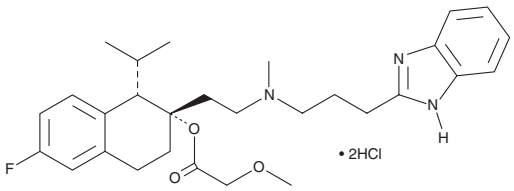
PRODUCT INFORMATION

Mibefradil (hydrochloride)

Item No. 15037

CAS Registry No.:	116666-63-8
Formal Name:	(1S,2S)-2-[2-[[3-(1H-benzimidazol-2-yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-2-naphthalenyl ester 2-methoxy-acetic acid, dihydrochloride
Synonyms:	Posicor, Ro 40-5967
MF:	$C_{29}H_{38}FN_3O_3$ • 2HCl
FW:	568.6
Purity:	≥95%
UV/Vis.:	λ_{max}: 242, 270, 276 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

Mibefradil (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the mibefradil (hydrochloride) in the solvent of choice. Mibefradil (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of mibefradil (hydrochloride) in ethanol and DMF is approximately 16 mg/ml and approximately 14 mg/ml in DMSO.

Mibefradil (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, mibefradil (hydrochloride) should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Mibefradil (hydrochloride) has a solubility of approximately 0.2 mg/ml in a 1:4 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Mibefradil is a general calcium channel blocker that shows modest selectivity for T-type channels over L-type channels (IC_{50} = 2.7 and 18.6 µM, respectively).[1-3] It is a potent vasodilator, increasing coronary artery flow with an EC_{50} value of 54 nM.[2] Mibefradil has minimal negative inotropic effects, supporting its use as an anti-hypertensive agent.[2,4]

References

1. Bezprozvanny, I. and Tsien, R.W. Voltage-dependent blockade of diverse types of voltage-gated Ca^{2+} channels expressed in *Xenopus* oocytes by the Ca^{2+} channel antagonist mibefradil (Ro 40-5967). *Mol. Pharmacol.* **48(3)**, 540-549 (1995).
2. Osterrieder, W. and Holck, M. *In vitro* pharmacologic profile of Ro 40-5967, a novel Ca^{2+} channel blocker with potent vasodilator but weak inotropic action. *J. Cardiovasc. Pharmacol.* **13(5)**, 754-759 (1989).
3. Mehrke, G., Zong, X.G., Flockerzi, V., *et al.* The Ca^{++}-channel blocker Ro 40-5967 blocks differently T-type and L-type Ca^{++} channels. *J. Pharmacol. Exp. Ther.* **271(3)**, 1483-1488 (1994).
4. Véniant, M., Clozel, J.-P., Hess, P., *et al.* Hemodynamic profile of Ro 40-5967 in conscious rats: Comparison with diltiazem, verapamil, and amlodipine. *J. Cardiovasc. Pharmacol.* **18(10)**, S55-S58 (1991).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM