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DATASHEET

Mibefradil dihydrochloride

Product overview

Name	Mibefradil dihydrochloride
Cat No	HB1226
Alternative names	Ro 40-5967
Biological action	Blocker
Purity	>95%
Description	Potent, reversible T- / L-type Ca^{2+} channel blocker

Images



Biological Data

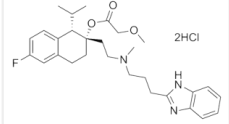
Biological description	Potent and reversible T-type ($\text{IC}_{50} = 2.7\mu\text{M}$) and L-type ($\text{K}_i = 18.6\mu\text{M}$) Ca^{2+} channel blocker. Exhibits 10-15-fold selectivity for T-type channels over L-type channels. Cell permeable. Displays antihypertensive and hypoglycemic properties.
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Solubility & Handling

Storage instructions	-20 °C
Solubility overview	Soluble in water (50mM) or DMSO (100mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

Chemical Data

Chemical 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 methoxyacetoacetate dihydrochloride
Molecular Weight	568.56
Chemical structure	

Chemical name	(1 <i>S</i> ,2 <i>S</i>)-2-[2-[[3-(1 <i>H</i> -Benzimidazol-2-yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-2-naphthalenyl methoxyacetoacetate dihydrochloride
	
Molecular Formula	C ₂₉ H ₃₈ FN ₃ O ₃ ·2HCl
CAS Number	116666-63-8
PubChem identifier	60662
SMILES	Cl.Cl.COCC(=O)O[C@]1(CCN(C)CCCC2=NC3=C(N2)C=CC=C3)CCC2=C(C=CC(F)=C2)[C@@H]1C(C)C
InChi	InChI=1S/C29H38FN3O3.2ClH/c1-20(2)28-23-12-11-22(30)18-21(23)13-14-29(28,36-27(34)19-35-4)15-17-33(3)16-7-10-26-31-24-8-5-6-9-25(24)32-26;;/h5-6,8-9,11-12,18,20,28H,7,10,13-17,19H2,1-4H3,(H,31,32);2*1H/t28-,29-;;/m0../s1
InChiKey	MTJLQTFHJIHXIX-GDUXWEAWSA-N
MDL number	MFCD00868314

References

The T- and L-type calcium channel blocker (CCB) mibefradil attenuates leg edema induced by the L-type CCB nifedipine in the spontaneously hypertensive rat: a novel differentiating assay.

Major TC *et al* (2008) J Pharmacol Exp Ther 325(3)

PubMedID [18326812](#)

A mibefradil metabolite is a potent intracellular blocker of L-type Ca(2+) currents in pancreatic beta-cells.

Wu S *et al* (2000) J Pharmacol Exp Ther 292(3)

PubMedID [10688607](#)

Mibefradil reduces blood glucose concentration in db/db mice.

Lu Y *et al* (2014) Clinics (Sao Paulo) 69(1)

PubMedID [24473561](#)