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DATASHEET

Isradipine

Product overview

Name	Isradipine
Cat No	HB1223
Alternative names	PN 200-110
Biological action	Blocker
Purity	>99%
Description	L-type voltage gated calcium channel blocker

Images



Biological Data

Biological description	L-type voltage gated calcium channel blocker ($EC_{50} = 1.4 \text{ nM}$). Highest affinity for $Ca_v1.3$ and $Ca_v1.2$ channels over $Ca_v1.4$. Displays neuroprotective properties. Blood brain barrier permeable.
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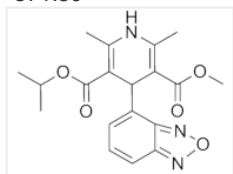
Solubility & Handling

Storage instructions	Room temperature
Solubility overview	Soluble in DMSO (50mM) or ethanol (20mM)
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	4-(2,1,3-Benzoxadiazol-4-yl)-1,4-dihydro-2,6-dimethyl-3,5-pyridinecarboxylic acid methyl 1-methylethyl ester
Molecular Weight	371.39

Chemical structure



Molecular Formula	$C_{19}H_{21}N_3O_5$
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Chemical name	4-(2,1,3-Benzoxadiazol-4-yl)-1,4-dihydro-2,6-dimethyl-3,5-pyridinecarboxylic acid methyl 1-methylethyl ester
CAS Number	75695-93-1
PubChem identifier	3784
SMILES	<chem>CC1=C(C(C(=C(N1)C)C(=O)OC(C)C)C2=CC=CC3=NON=C32)C(=O)OC</chem>
InChi	InChI=1S/C19H21N3O5/c1-9(2)26-19(24)15-11(4)20-10(3)14(18(23)25-5)16(15)12-7-6-8-13-17(12)22-27-21-13/h6-9,16,20H,1-5H3
InChiKey	HMJIYCCIJYRONP-UHFFFAOYSA-N
MDL number	MFCD00153820
Appearance	Yellow solid

References

The L-type channel antagonist isradipine is neuroprotective in a mouse model of Parkinson's disease.

Ilijic E *et al* (2011) *Neurobiol Dis* 43(2)

PubMedID [21515375](#)

Expression and 1,4-dihydropyridine-binding properties of brain L-type calcium channel isoforms.

Sinnegger-Brauns MJ *et al* (2009) *Mol Pharmacol* 75(2)

PubMedID [19029287](#)

L-type voltage-gated calcium channel blockade with isradipine as a therapeutic strategy for Alzheimer's disease.

Anekonda TS *et al* (2011) *Neurobiol Dis* 41(1)

PubMedID [20816785](#)

PN 200-110, a new calcium antagonist: electrophysiological, inotropic, and chronotropic effects on guinea pig myocardial tissue and effects on contraction and calcium uptake of rabbit aorta.

Hof RP *et al* (1984) *J Cardiovasc Pharmacol* 6(3)

PubMedID [6202964](#)
