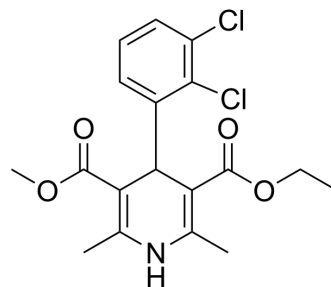


Felodipine

Cat. No.:	HY-B0309		
CAS No.:	72509-76-3		
Molecular Formula:	C ₁₈ H ₁₉ Cl ₂ NO ₄		
Molecular Weight:	384.25		
Target:	Calcium Channel; Autophagy		
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling; Autophagy		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	1 year
		-20°C	6 months



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (260.25 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	2.6025 mL	13.0124 mL	26.0247 mL
		5 mM	0.5205 mL	2.6025 mL	5.2049 mL
10 mM		0.2602 mL	1.3012 mL	2.6025 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (6.51 mM); Clear solution 2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (6.51 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	Felodipine, a dihydropyridine, is a potent, vasoselective calcium channel antagonist. Felodipine lowers blood pressure (BP) by selective action on vascular smooth muscle, especially in the resistance vessels. Felodipine, an anti-hypertensive agent, induces autophagy. Felodipine can cross the blood-brain barrier ^{[1][2][3]} .
IC₅₀ & Target	L-type calcium channel
In Vitro	Felodipine, a dihydropyridine calcium antagonist, is the most potent in relaxing porcine coronary arteries (IC ₅₀ =0.15 nM) ^[1] . Felodipine, an L-type calcium channel blocker, induces autophagy and clears diverse aggregate-prone, neurodegenerative disease-associated proteins ^[2] . Felodipine blocks the muscarinic receptor-mediated (carbachol) Ca ²⁺ -dependent contraction of guinea pig ileum

longitudinal smooth muscle (GPILSM) with an IC_{50} of 1.45 nM^[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Int J Pharm. 2017 Jan 30;517(1-2):19-24.

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REFERENCES

- [1]. Johnson JD, et al. Calcium and calmodulin antagonists binding to calmodulin and relaxation of coronary segments. J Pharmacol Exp Ther. 1983;226(2):330-334.
- [2]. Siddiqi FH, et al. Felodipine induces autophagy in mouse brains with pharmacokinetics amenable to repurposing [published correction appears in Nat Commun. 2019 Jun 4;10(1):2530]. Nat Commun. 2019;10(1):1817. Published 2019 Apr 18.
- [3]. Yiu, S. and E.E. Knaus, Synthesis, biological evaluation, calcium channel antagonist activity, and anticonvulsant activity of felodipine coupled to a dihydropyridine-pyridinium salt redox chemical delivery system. J Med Chem, 1996. 39(23): p. 4576-82.
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Caution: Product has not been fully validated for medical applications. For research use only.

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