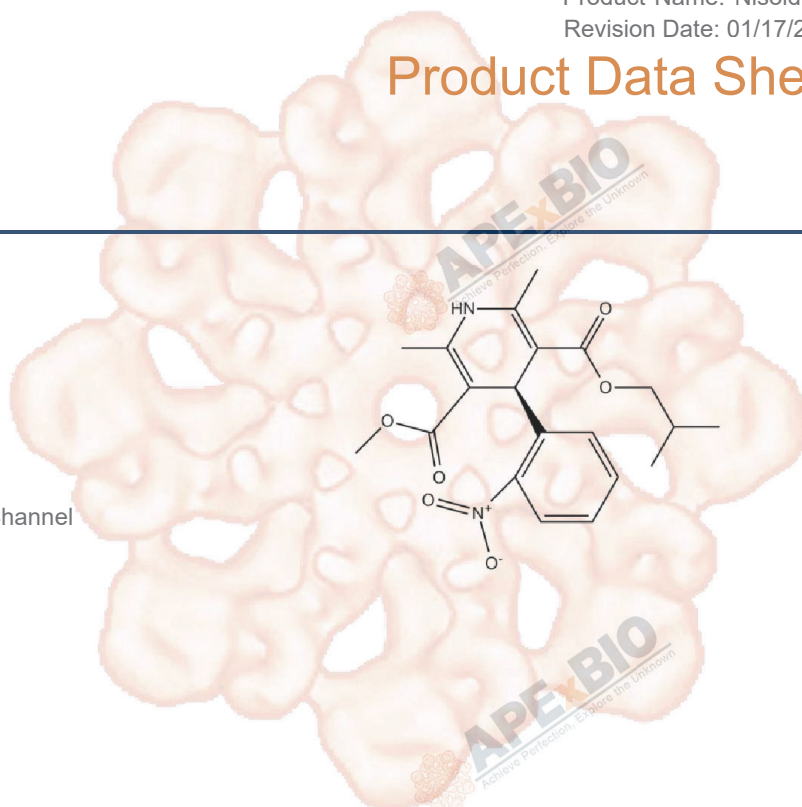


Product Data Sheet

Nisoldipine

Cat. No.:	B1989
CAS No.:	63675-72-9
Formula:	C ₂₀ H ₂₄ N ₂ O ₆
M.Wt:	388.41
Synonyms:	
Target:	Membrane Transporter/Ion Channel
Pathway:	Calcium Channel
Storage:	Store at -20°C



Solvent & Solubility

insoluble in H₂O; ≥10.62 mg/mL in EtOH; ≥11.55 mg/mL in DMSO

In Vitro

Preparing Stock Solutions	Solvent	Mass		
		1mg	5mg	10mg
	Concentration			
	1 mM	2.5746 mL	12.8730 mL	25.7460 mL
	5 mM	0.5149 mL	2.5746 mL	5.1492 mL
	10 mM	0.2575 mL	1.2873 mL	2.5746 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary

calcium channel blocker

IC₅₀ & Target

In Vitro

Cell Viability Assay

Cell Line: Guinea-pig ventricular myocytes

Preparation method:

The solubility of this compound in DMSO is > 11.6 mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below - 20 °C for several months.

Reacting conditions:

10 ~ 100 μM; 8 ~ 10 mins

	Applications:	In guinea-pig ventricular myocytes, Nisoldipine inhibited rapidly activating delayed-rectifier K ⁺ current (I(Kr)) with an IC ₅₀ value of 23 μM, as well as slowly activating delayed-rectifier K ⁺ current (I(Ks)) with an IC ₅₀ value of 40 μM. It was estimated that Nisoldipine is approximately 30 times more selective for L-type Ca ²⁺ channels than for delayed-rectifier K ⁺ channels.
In Vivo	Animal experiment	
	Animal models:	A dog model of coronary ischemia-reperfusion
	Dosage form:	6.6 μg/kg/min; i.v.
	Applications:	Compared with the control group, the Nisoldipine treatment group showed similar hemodynamic measurements. However, mass of necrosis and mass at risk was obviously lower in the Nisoldipine group. In a dog model of coronary ischemia-reperfusion, Nisoldipine reduced the infarct size.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

See more customer validations on www.apexbt.com.

References

- [1]. Morel N, Buryi V, Feron O, Gomez JP, Christen MO, Godfraind T. The action of calcium channel blockers on recombinant L-type calcium channel alpha1-subunits. Br J Pharmacol. 1998 Nov;125(5):1005-12.
- [2]. Missan S1, Zhabyeyev P, Dyachok O, Jones SE, McDonald TF. Block of cardiac delayed-rectifier and inward-rectifier K⁺ currents by nisoldipine. Br J Pharmacol. 2003 Nov;140(5):863-70.
- [3]. Hammerman H, Moscovitz M, Hir J. Beneficial effect of nisoldipine in repeated coronary reperfusion. Coron Artery Dis. 1997 Feb;8(2):97-100.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APEX BIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.



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