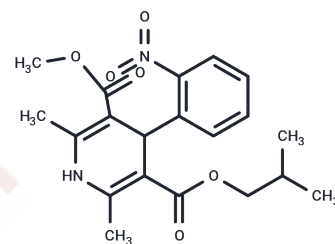


## Nisoldipine

## Chemical Properties

CAS No. :	63675-72-9
Formula:	C <sub>20</sub> H <sub>24</sub> N <sub>2</sub> O <sub>6</sub>
Molecular Weight:	388.41
Appearance:	no data available
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year



## Biological Description

Description	Nisoldipine (BAY-k 5552) is a dihydropyridine calcium channel antagonist that acts as a potent arterial vasodilator and antihypertensive agent.
Targets(IC50)	Calcium Channel,Reactive Oxygen Species
In vitro	In patients with Timothy syndrome, Nisoldipine (IC <sub>50</sub> =267 nM) induces vasodilation and lowers blood pressure by inhibiting the influx of calcium ions through L-type calcium channels, thereby decreasing the contractility of arterial smooth muscle and subsequent vasoconstriction.
In vivo	In guinea pig ventricular myocytes, Nisoldipine acts on delayed rectifier K <sup>+</sup> channels, inhibiting the rapid-activating component (IK <sub>r</sub> ) with an IC <sub>50</sub> of 23 μM, and the slow-activating component (IK <sub>s</sub> ) with an IC <sub>50</sub> of 40 μM.
Kinase Assay	Binding experiments of electrophysiology: CHO cells expressing the subunit of the voltage-dependent L-type Ca <sup>2+</sup> channel are cultured in medium without serum in the presence of different concentrations of Nisoldipine. Then Ca <sup>2+</sup> channel current elicited from a holding potential of -100 mV or -50 mV is recorded at room temperature with the whole-cell configuration of the patch-clamp method using the List EPC-7 patch-clamp amplifier and pClamp software. The concentration of competitor inhibiting 50% of the specific binding represents IC <sub>50</sub> .
Cell Research	The myocytes are bathed in normal Tyrode's solution, held at -80 mV, and depolarised after 200-ms prepulses (-40mV) to more positive potentials for 500 ms at 0.1 Hz, tail currents are recorded on repolarisations to -40mV. The myocytes are exposed to 10-100 mM Nisoldipine for 8-10 minutes. Then the whole-cell membrane currents are recorded using an EPC-7 amplifier.(Only for Reference)

## Solubility Information

Solubility	Ethanol: 56 mg/mL (144.18 mM),Sonication is recommended. H <sub>2</sub> O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 50 mg/mL (128.73 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5746 mL	12.873 mL	25.746 mL
5 mM	0.5149 mL	2.5746 mL	5.1492 mL
10 mM	0.2575 mL	1.2873 mL	2.5746 mL
50 mM	0.0515 mL	0.2575 mL	0.5149 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

## Reference

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