



## Nisoldipine

|                    |                              |
|--------------------|------------------------------|
| <b>Cat. No.:</b>   | OB0225WX-2032                |
| <b>Appearance:</b> | Solid                        |
| <b>Purity:</b>     | ≥99%                         |
| <b>Identity:</b>   | Confirmed by NMR, and LC-MS. |
| <b>Size:</b>       | 100 mg; 500 mg; 1 g          |

This product is for research use only and is not intended for diagnostic use.

### Product Overview

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description</b>    | Nisoldipine is a dihydropyridine-class calcium channel antagonist that functions as a potent antihypertensive agent through arterial vasodilation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Synonym</b>        | BAY-k 5552; 63675-72-9; Sular; Nisacor; Baymycard; Nisoldipin; Zadipina; Nisoldipino; Nisoldipinum; Syscor; Bay k 5552; 3-Isobutyl 5-methyl 2,6-dimethyl-4-(2-nitrophenyl)-1,4-dihydropyridine-3,5-dicarboxylate; Bay-k-5552; Geomatrix 16e; MFC D00478055; 3,5-Pyridinedicarboxylic acid, 1,4-dihydro-2,6-dimethyl-4-(2-nitrophenyl)-, methyl 2-methylpropyl ester; 3-O-methyl 5-O-(2-methylpropyl) 2,6-dimethyl-4-(2-nitrophenyl)-1,4-dihydropyridine-3,5-dicarboxylate; (+/-)-NI SOLDIPINE; (+/-)-Isobutyl methyl 1,4-dihydro-2,6-dimethyl-4-(o-nitrophenyl)-3,5-pyridinedicarboxylate; Isobutyl 1,4-dihydro-5-methoxycarbonyl-2,6-dimethyl-4-(2-nitrophenyl)-3-pyridincarboxylate; methyl 2-methylpropyl 2,6-dimethyl-4-(2-nitrophenyl)-1,4-dihydropyridine-3,5-dicarboxylate |
| <b>CAS No.</b>        | 63675-72-9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Compound CID</b>   | 4499                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Formula</b>        | C <sub>20</sub> H <sub>24</sub> N <sub>2</sub> O <sub>6</sub>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Formula Weight</b> | 388.41                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

### Specification

|                         |                         |
|-------------------------|-------------------------|
| <b>Targets&amp;IC50</b> | Cav 1.2; L-type: 10 nM  |
| <b>Relative Density</b> | 1.205 g/cm <sup>3</sup> |



|                      |                                                                                                                                                                                            |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>IUPAC Name</b>    | 3-O-Methyl 5-O-(2-methylpropyl) 2,6-dimethyl-4-(2-nitrophenyl)-1,4 -dihydropyridine-3,5-dicarboxylate                                                                                      |
| <b>InChI</b>         | InChI=1S/C20H24N2O6/c1-11(2)10-28-20(24)17-13(4)21-12(3)16(19(23)27-5)18(17)14-8-6-7-9-15(14)22(25)26/h6-9,11,18,21H,10H2,1-5H3                                                            |
| <b>InChI Key</b>     | VKQFCGNPDRICFG-UHFFFAOYSA-N                                                                                                                                                                |
| <b>SMILES string</b> | <chem>CC1=C(C(C(=C(N1)C)C(=O)OCC(C)C)C2=CC=CC=C2[N+](=O)[O-])C(=O)OC</chem>                                                                                                                |
| <b>Stability</b>     | 3 years in powder form.                                                                                                                                                                    |
| <b>Storage</b>       | Storage at -20°C.                                                                                                                                                                          |
| <b>Applications</b>  | Nisoldipine is used in cardiovascular pharmacology as a potent calcium channel blocker to study the management of hypertension and the modulation of vascular smooth muscle contractility. |

## Library Information

|                               |                                                                              |
|-------------------------------|------------------------------------------------------------------------------|
| <b>Target</b>                 | Calcium channel; Reactive oxygen species                                     |
| <b>Receptor</b>               | Calcium channel; L-type Cav1.2; Reactive oxygen species                      |
| <b>Pathways</b>               | NF-κB; Immunology/Inflammation; Membrane transporter/Ion channel; Metabolism |
| <b>Plate Number</b>           | AOCL-27                                                                      |
| <b>Plate Location</b>         | a5                                                                           |
| <b>Empty Location</b>         | a1-h1; a12-h12                                                               |
| <b>Container</b>              | 96-well plate                                                                |
| <b>Formulation</b>            | 10mM DMSO                                                                    |
| <b>DMSO Max Solubility</b>    | 50 mg/mL; 128.73 mM                                                          |
| <b>Water Max Solubility</b>   | <1 mg/mL (insoluble or slightly soluble)                                     |
| <b>Ethanol Max Solubility</b> | 56 mg/mL; 144.2 mM                                                           |