



# SZABO SCANDIC

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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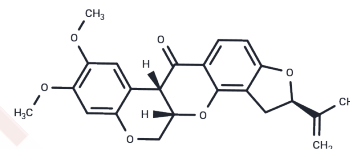
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## Rotenone

## Chemical Properties

CAS No. :	83-79-4
Formula:	C <sub>23</sub> H <sub>22</sub> O <sub>6</sub>
Molecular Weight:	394.42
Appearance:	no data available
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year



## Biological Description

Description	Rotenone (Rotocide) is a natural product and a botanical insecticide. Rotenone is a mitochondrial electron transport complex I inhibitor that promotes the production of reactive oxygen species in mitochondria and induces apoptosis.
Targets(IC50)	Apoptosis,Dehydrogenase,Mitochondrial Metabolism,p53,Autophagy
In vitro	<p><b>METHODS:</b> Human leukemia cells HL-60 were treated with Rotenone (0-1000 nM) for 30 min and oxygen consumption was measured using a Clark oxygen electrode.</p> <p><b>RESULTS:</b> Rotenone dose-dependently inhibited HL-60 cell respiration. Rotenone inhibited cellular respiration by more than 96% at 500 nM. [1]</p> <p><b>METHODS:</b> 10th DIV cells were treated with Rotenone (20 nM) for 48 h. LDH levels were measured by LDH release assay.</p> <p><b>RESULTS:</b> LDH release can be used as an indicator of general cytotoxicity. rotenone induced an increase in LDH release, and LDH activity increased more than 6-fold compared to the control group. LDH activity increased more than 6-fold compared to the control group.[2]</p>
In vivo	<p><b>METHODS:</b> To establish a reproducible mouse model of Rotenone-induced Parkinson's disease (PD), Rotenone (2.5 mg/kg) was administered intraperitoneally to C57BL/6 mice once daily for two weeks.</p> <p><b>RESULTS:</b> Systemic exposure of mice to Rotenone resulted in progressive accumulation and regional spread of p129 aggregates, which preceded the maximal loss of DAN. [3]</p> <p><b>METHODS:</b> To study neurotoxicity, Rotenone (30-100 mg/kg) was administered orally to C57BL/6 mice once daily for fifty-six days.</p> <p><b>RESULTS:</b> The survival of Rotenone-treated mice at 30 mg/kg was unchanged from 28-56 days, although the survival of Rotenone-treated mice was reduced to approximately 70% within one week. 100 mg/kg Rotenone-treated mice showed a sudden decrease in survival after 28 days, and ultimately to approximately 15% after 56 days. A regimen of Rotenone given chronically at 30 mg/kg for 56 days is more useful for understanding the mechanisms of DA neurodegeneration. [4]</p>

## Solubility Information

Solubility	DMSO: 18.33 mg/mL (46.48 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	2.5354 mL	12.6768 mL	25.3537 mL
5 mM	0.5071 mL	2.5354 mL	5.0707 mL
10 mM	0.2535 mL	1.2677 mL	2.5354 mL
50 mM	0.0507 mL	0.2535 mL	0.5071 mL

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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

Li Y, Sun H, Tian Z, et al. The determination of *Plutella xylostella* (L.) GSTs (PxGSTs) involved in the detoxification metabolism of Tolfenpyrad. *Pest Management Science*. 2020

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