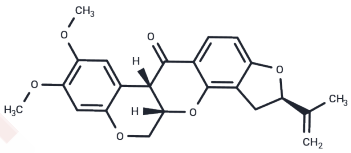
Data Sheet (Cat.No.T2970)

TargetMol

Rotenone

Chemical Properties



CAS No. : 83-79-4

Formula: C23H22O6

Molecular Weight: 394.42

Appearance: no data available

Storage: keep away from direct sunlight,store at low temperature,store under nitrogen
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,Mitochondrial Metabolism,Autophagy,Dehydrogenase,p53
In vitro	**METHODS**: 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. **RESULTS**: Rotenone dose-dependently inhibited HL-60 cell respiration. Rotenone inhibited cellular respiration by more than 96% at 500 nM. [1] **METHODS**: 10th DIV cells were treated with Rotenone (20 nM) for 48 h. LDH levels were measured by LDH release assay. **RESULTS**: 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]
In vivo	**METHODS**: 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. **RESULTS**: Systemic exposure of mice to Rotenone resulted in progressive accumulation and regional spread of p129 aggregates, which preceded the maximal loss of DAn. [3] **METHODS**: To study neurotoxicity, Rotenone (30-100 mg/kg) was administered orally to C57BL/6 mice once daily for fifty-six days. **RESULTS**: 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]

Solubility Information

Solubility	DMSO: 18.33 mg/mL (46.48 mM),Sonication is recommended. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.94 mg/mL (9.99 mM),Suspension. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	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

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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Non-canonical hepatic androgen receptor mediates glucagon sensitivity in female mice through the PGC1α/ERRα/mitochondria axis