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DATASHEET

Rotenone

Product overview

Name	Rotenone
Cat No	HB5398
Purity	>95%
Description	Mitochondrial Complex I Inhibitor. Induces mitochondrial dysfunction.

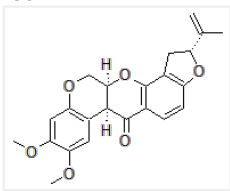
Biological Data

Biological description	Mitochondrial Complex I Inhibitor which impairs mitochondrial respiration by inhibiting to induce ATP depletion, mROS production and loss of mitochondrial membrane potential. It is commonly used to experimentally induce mitochondrial dysfunction and also used to induce Parkinsonian animal disease models. Also induces proteasome inhibition. Cell permeable and brain penetrant.
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Solubility & Handling

Storage instructions	-20 °C
Solubility overview	Soluble in DMSO (100mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

Chemical Data

Chemical name	(2R,6aS,12aS)-1,2,12,12a-Tetrahydro-8,9-dimethoxy-2-(1-methylethenyl)-[1]benzopyrano[3,4-b]furo[2,3-h][1]benzopyran-6(6aH)-one
Molecular Weight	394.42
Chemical structure	
Molecular Formula	C ₂₃ H ₂₂ O ₆
CAS Number	83-79-4
PubChem identifier	6758
SMILES	CC(=C)[C@H]1CC2=C(O1)C=CC3=C2O[C@@H]4COC5=CC(=C(C=C5[C@@H]4C3=O)OC)OC
InChi	InChI=1S/C23H22O6/c1-11(2)16-8-14-15(28-16)6-5-12-22(24)21-13-7-18(25-3)19(26-4)9-17(13)27-10-20(21)29-23(12)14/h5-7,9,16,20-21H,1,8,10H2,2-4H3/t16-,20-,21+/m1/s1
InChiKey	JUVIOZPCNVVQFO-HBGVWJBISA-N
MDL number	MFCD09025614
Appearance	Off-white solid

References

Mechanistic Investigations of the Mitochondrial Complex I Inhibitor Rotenone in the Context of Pharmacological and Safety Evaluation

Heinz et al (2017) Sci Rep. 7,45465

PubMedID [28374803](#)

Mechanisms of Rotenone-Induced Proteasome Inhibition

Chou et al (367-72) Neurotoxicology 31(4)

PubMedID [20417232](#)

Rotenone-induced Impairment of Mitochondrial Electron Transport Chain Confers a Selective Priming Signal for NLRP3 Inflammasome Activation

Hee Won et al (2015) J Biol Chem 290(45)

PubMedID [26416893](#)
