LKT Laboratories, Inc.

Rotenone

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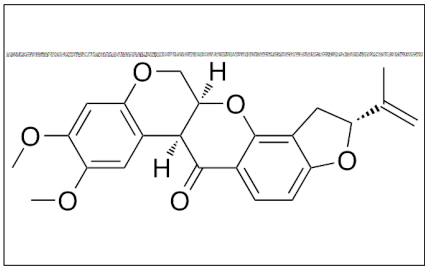
Product Information

Product ID R5878
CAS No. 83-79-4
Chemical Name (2R,6aS,12aS)-1,2,6,6a,12,12a-hexahydro-2-isopropenyl-8,9-dimethoxychromeno[3,4-b]furo[2,3-h]chromen-6-one
Synonym

Formula $C_{23}H_{22}O_6$
Formula Wt. 394.41
Melting Point 163°C
Purity ≥97%
Solubility



Pricing and Availability

Bulk quanitites available upon request

Product ID	Size	List Price
R5878	1 g	$79.10
R5878	5 g	$254.80
R5878	25 g	$562.50

Store Temp Ambient
Ship Temp Ambient
Description Rotenone is a pesticide that exhibits genotoxic, pro-oxidative, and neurodegenerative properties. In vitro, rotenone induces formation of micronuclei and modifies the microtubule organizing centers of mitotic spindles. In other cellular models, rotenone inhibits the mitochondrial electron transport complex I, altering mitochondrial respiration and inducing mitochondrial oxidative stress. Rotenone also inhibits background K+ currents, causing rapid cell membrane depolarization and increases in intracellular Ca2+. In vitro, this compound also activates microglial superoxide release, resulting in neurodegeneration of dopaminergic neurons, mimicking pathologies associated with Parkinson's disease.

References

Johnson GE, Parry EM. Mechanistic investigations of low dose exposures to the genotoxic compounds bisphenol-A and rotenone. Mutat Res. 2008 Mar 12;651(1-2):56-63. PMID: 18083626.

Sherer TB, Richardson JR, Testa CM, et al. Mechanism of toxicity of pesticides acting at complex I: relevance to environmental etiologies of Parkinson's disease. J Neurochem. 2007 Mar;100(6):1469-79. PMID: 17241123.

Wyatt CN, Buckler KJ. The effect of mitochondrial inhibitors on membrane currents in isolated neonatal rat carotid body type I cells. J Physiol. 2004 Apr 1;556(Pt 1):175-91. PMID: 14724184.

Gao HM, Hong JS, Zhang W, et al. Distinct role for microglia in rotenone-induced degeneration of dopaminergic neurons. J Neurosci. 2002 Feb 1;22(3):782-90. PMID: 11826108.