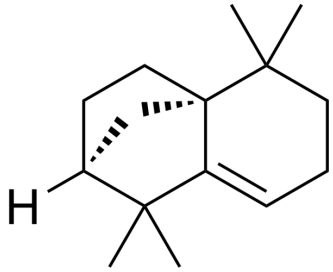
Isolongifolene

Cat. No.:	HY-N7363		
CAS No.:	1135-66-6		
Molecular Formula:	$C_{15}H_{24}$		
Molecular Weight:	204.35		
Target:	Apoptosis		
Pathway:	Apoptosis		
Storage:	Pure form	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 10 mg/mL (48.94 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	4.8936 mL	24.4678 mL	48.9356 mL
	5 mM	0.9787 mL	4.8936 mL	9.7871 mL
	10 mM	0.4894 mL	2.4468 mL	4.8936 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 1 mg/mL (4.89 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 1 mg/mL (4.89 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1 mg/mL (4.89 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Isolongifolene ((-)-Isolongifolene) is a tricyclic sesquiterpene isolated from Murraya koenigii. Isolongifolene attenuates Rotenone-induced oxidative stress, mitochondrial dysfunction and apoptosis through the regulation of PI3K/AKT/GSK-3β signaling pathways. Isolongifolene has antioxidant, anti-inflammatory, anticancer and neuroprotective properties[1].

In Vitro

Isolongifolene (0-50 μM; 26 hours; SH-SY5Y neuroblastoma cells) treatment significantly alleviates Rotenone-induced cytotoxicity in SH-SY5Y cells in a dose-dependent manner[1].
Isolongifolene (10 μM; 26 hours; SH-SY5Y neuroblastoma cells) treatment attenuates Rotenone-induced apoptosis in SH-

SY5Y cells[1].

Isolongifolene (10 μM; 26 hours; SH-SY5Y neuroblastoma cells) treatment attenuates Rotenone induced toxicity by down-regulating Bax, caspases-3, 6, 8 and 9 expression and up-regulating of Bcl-2 expression. Furthermore regulation of p-P13K, p-AKT and p-GSK-3β expression by Isolongifolene[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	SH-SY5Y neuroblastoma cells
Concentration:	0 μM, 1 μM, 2.5 μM, 5 μM, 10 μM, 20 μM and 50 μM
Incubation Time:	26 hours
Result:	Significantly alleviated Rotenone-induced cytotoxicity in SH-SY5Y cells.

Apoptosis Analysis[1]

Cell Line:	SH-SY5Y neuroblastoma cells
Concentration:	10 μM
Incubation Time:	26 hours
Result:	Attenuated Rotenone-induced apoptosis in SH-SY5Y cells.

Western Blot Analysis[1]

Cell Line:	SH-SY5Y neuroblastoma cells
Concentration:	10 μM
Incubation Time:	26 hours
Result:	Attenuated rotenone induced toxicity by down-regulating Bax, caspases-3, 6, 8 and 9 expression and up-regulating of Bcl-2 expression. Prevented the rotenone-induced decreased phosphorylation of GSK-3β.

REFERENCES

[1]. Balakrishnan R, et al. Isolongifolene attenuates rotenone-induced mitochondrial dysfunction, oxidative stress and apoptosis. Front Biosci (Schol Ed). 2018 Jan 1;10:248-261.

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