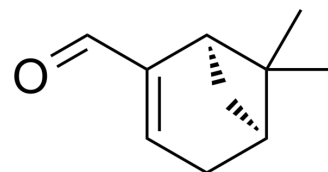


(-)-Myrtenal

Cat. No.:	HY-121401A
CAS No.:	18486-69-6
Molecular Formula:	C ₁₀ H ₁₄ O
Molecular Weight:	150.22
Target:	Akt
Pathway:	PI3K/Akt/mTOR
Storage:	-20°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (665.69 mM; Need ultrasonic)						
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg	
				1 mM	6.6569 mL	33.2845 mL	66.5690 mL
				5 mM	1.3314 mL	6.6569 mL	13.3138 mL
				10 mM	0.6657 mL	3.3285 mL	6.6569 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: ≥ 2.5 mg/mL (16.64 mM); Clear solution						
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (16.64 mM); Clear solution						
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (16.64 mM); Clear solution						

BIOLOGICAL ACTIVITY

Description	(-)-Myrtenal ((1R)-(-)-Myrtenal) is an orally active terpene with antitumour activity. (-)-Myrtenal ameliorates hyperglycemia by enhancing GLUT2 through Akt in the skeletal muscle and liver of diabetic rats ^{[1][2]} .
In Vitro	(-)-Myrtenal ((1R)-(-)-Myrtenal; 0.1-5 mM; for 24 h) exerts strong cytotoxic effect (IC ₅₀ = 5.3 mM) on human colon tumour (HT29) and human normal colon epithelial cells (CCD 841 CoTr) ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	(-)-Myrtenal ((1R)-(-)-Myrtenal; orally; 80 mg/kg/day for 28 days) reveals decreased the levels of plasma glucose, improved the plasma insulin levels, up-regulation of IRS2, Akt and GLUT2 in liver and IRS2, Akt and GLUT4 protein expression in

skeletal muscle in diabetic rats induced by single intraperitoneal injection of Streptozotocin (STZ) (40 mg/kg bw)^[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Mariusz Trytek, et al. Biological activity of oxygenated pinene derivatives on human colon normal and carcinoma cells. *Flavour and Fragrance Journal*, Volume33, Issue6, November 2018.
- [2]. Ayyasamy Rathinam, et al. Myrtenal ameliorates hyperglycemia by enhancing GLUT2 through Akt in the skeletal muscle and liver of diabetic rats. *Chem Biol Interact.* 2016 Aug 25;256:161-6.
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Caution: Product has not been fully validated for medical applications. For research use only.

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