Methyl jasmonate

Cat. No.: HY-135663

CAS No.: 1211-29-6

Molecular Formula: $C_{13}H_{20}O_3$

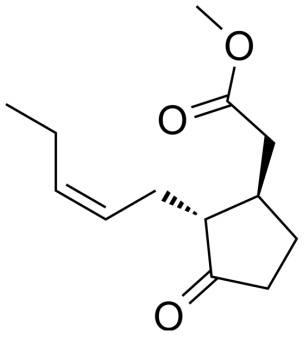
Molecular Weight: 224.3

Target: Others

Pathway: Others

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 : 100 mg/mL (445.83 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	4.4583 mL	22.2916 mL	44.5831 mL
	5 mM	0.8917 mL	4.4583 mL	8.9166 mL
	10 mM	0.4458 mL	2.2292 mL	4.4583 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 (11.15 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (11.15 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (11.15 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Methyl jasmonate is a phytohormone involved in plant defenses under stress conditions. Methyl jasmonate can improve antioxidant properties of blueberry leaf extracts (mainly anthocyanins), and decrease the viability and migration capacity of AGS cells. Anticarcinogenic activity[1].

In Vitro

Methyl jasmonate-treated blueberry leaf extraction (10-3200 μg/mL; 1 hour) can decrease cell viability of AGS cells with increasing dose[1].
Methyl jasmonate-treated blueberry leaf extraction (10-3200 μg/mL) can significantly decrease the expression of p-P70S6K

(AKT/mTOR pathway) and p-ERK1/2 (MAPK) proteins[1].

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

Cell Viability Assay

Cell Line:	Gastric cancer cells (line AGS)[1]
Concentration:	10, 25, 50, 100, 200, 400, 800, 1600 and 3200 μg/mL
Incubation Time:	1 hour
Result:	Cell viability of AGS cells gradually decreased in response to increasing doses of blueberry leaf extract from MeJA treated plants.

Western Blot Analysis

Cell Line:	AGS cells[1]
Concentration:	10, 50, 100, 200, 400, 800, 1600 and 3200 μg/mL
Incubation Time:	
Result:	Blueberry leaf extracts of MeJA-treated plants significantly decreased the expression of p-P70S6K (AKT/mTOR pathway) and p-ERK1/2 (MAPK) proteins.

REFERENCES

[1]. Ribera-Fonseca A, et al. The Anti-Proliferative and Anti-Invasive Effect of Leaf Extracts of Blueberry Plants Treated with Methyl Jasmonate on Human Gastric Cancer In Vitro Is Related to Their Antioxidant Properties. Antioxidants (Basel). 2020;9(1):45. Published 2020 Jan 4.

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