Didymin

Cat. No.: HY-N2068

CAS No.: 14259-47-3

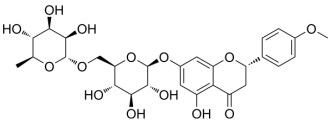
Molecular Formula: $C_{28}H_{34}O_{14}$

Molecular Weight: 594.56

Target: Apoptosis

Pathway: Apoptosis

Storage: 4°C, protect from light
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (420.48 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.6819 mL	8.4096 mL	16.8192 mL
	5 mM	0.3364 mL	1.6819 mL	3.3638 mL
	10 mM	0.1682 mL	0.8410 mL	1.6819 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: ≥ 2.17 mg/mL (3.65 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.17 mg/mL (3.65 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.17 mg/mL (3.65 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Didymin, a flavonoid glycoside, possesses antioxidant and anticancer properties. Didymin induces apoptosis by inhibiting N-Myc and upregulating RKIP in neuroblastoma[1].

In Vitro

Didymin (1-20 μM; 48 h) inhibits cell proliferation in human non-small-cell lung cancer cells[1].
Didymin (10-20 μM; 12-48 h) induced apoptosis in A549 and H460 cells, without affecting the cell cycle distribution.[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[1]

Cell Line:	A549 and H460 cells
Concentration:	1 μM, 5 μM, 10 μM, 20 μM
Incubation Time:	48 h
Result:	Inhibited cell proliferation in human non-small-cell lung cancer cells.

Apoptosis Analysis[1]

Cell Line:	A549 and H460 cells
Concentration:	10 μM, 20 μM
Incubation Time:	12 h, 24 h, 48 h
Result:	Induced apoptosis in A549 and H460 cells, without affecting the cell cycle distribution.

In Vivo

Didymin (6 mg/kg/day; i.p.; daily for 28 days) delays the tumor growth in nude mice[1].

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

Animal Model:	Male nude mice [6 weeks old; BALB/cA-nu (nu/nu)] injected with A549 cells[1]
Dosage:	6 mg/kg/day
Administration:	i.p.; daily for 28 days
Result:	Inhibited tumor growth in nude mice.

CUSTOMER VALIDATION

- J Transl Med. 2023 Dec 19;21(1):921.
- Diabetol Metab Syndr. 2024 Jan 3;16(1):7.
- Yonsei Med J. 2022 Oct;63(10):956-965.

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REFERENCES

[1]. Hung JY, et al. Didymin, a dietary flavonoid glycoside from citrus fruits, induces Fas-mediated apoptotic pathway in human non-small-cell lung cancer cells in vitro and in vivo. Lung Cancer. 2010 Jun;68(3):366-74.

[2]. Singhal J, et al. Didymin induces apoptosis by inhibiting N-Myc and upregulating RKIP in neuroblastoma. Cancer Prev Res (Phila). 2012 Mar;5(3):473-83.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA