Flaconitine

Cat. No.: HY-N0276

CAS No.: 77181-26-1

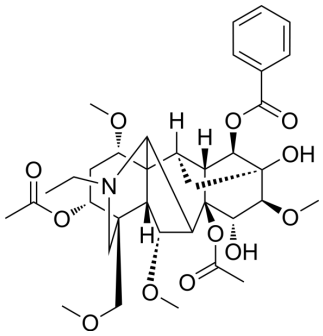
Molecular Formula: $C_{36}H_{49}NO_{12}$

Molecular Weight: 687.77

Target: NF-κB

Pathway: NF-κB

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



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (36.35 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.4540 mL	7.2699 mL	14.5397 mL
	5 mM	0.2908 mL	1.4540 mL	2.9079 mL
	10 mM	0.1454 mL	0.7270 mL	1.4540 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 (3.63 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (3.63 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (3.63 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Flaconitine is considered to be a NF-κB inhibitor.

IC_{50} & Target

NF-κB

In Vitro

Flaconitine has been demonstrated to suppress TNF-α induced NF-κB activation and is considered as a diester-diterpenoid-type NF-κB inhibitor[1] Flaconitine (3-Acetylaconitine) is evaluated for its cytotoxic activity against human leukemic P388 cells using the SRB (Sulforhodamine B) method, with Etoposide as the positive control. The cell growth inhibitory potency of Flaconitine is expressed as IC_{50} (μM) Value. Flaconitine exhibits moderately cytotoxic activity with an IC_{50} of 18.6 μM[2].

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

PROTOCOL

Cell Assay [2]

The assay is performed following a standard published procedure using microtiter plate format and sulforhodamine B standing at the end point. The leukemic cells (P388) are exposed to Flaconitine (3-Acetylaconitine) for three days. Cells are grown and maintained in an incubator set at 37°C, 5% CO_2 and 95% humidity. RPMI-1640 media supplemented with 10% fetal calf serum (FCS) and 0.5% trypsin are used to culture P388 cells[2].

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

REFERENCES

[1]. Dong L, et al. Identification of nuclear factor-κB inhibitors and β2 adrenergic receptor agonists in Chinese medicinal preparation Fuzilizhong pills using UPLC with quadrupole time-of-flight MS. Phytochem Anal. 2014 Mar-Apr;25(2):113-21.

[2]. He YQ, et al. Diterpenoid alkaloids from a Tibetan medicinal plant Aconitum richardsonianum var. pseudosessiliflorum and their cytotoxic activity. J Pharm Anal. 2011 Feb;1(1):57-59.

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