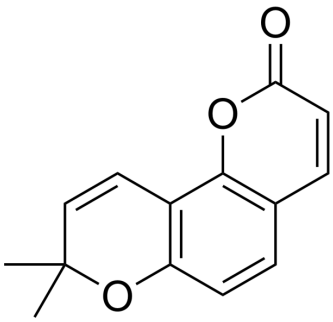
Seselin

Cat. No.:	HY-W505771
CAS No.:	523-59-1
Molecular Formula:	$C_{14}H_{12}O_3$
Molecular Weight:	228.24
Target:	Fungal
Pathway:	Anti-infection

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



BIOLOGICAL ACTIVITY

Description

Seselin is an anticancer, antinociceptive, anti-inflammatory and antifungal agent. Seselin is orally active[1][2][3].

In Vitro

Seselin shows cytotoxic effects with ED_{50} of 8.66 and 9.94 μg/mL against P-388 and HT-29 cells, respectively[1].

Seselin (5-20 μM; 0.5-24 h) inhibits cytokine output from macrophages stimulated by LPS and IFN-γ dose- and time-dependently[3].

Seselin (5-20 μM; 12 h) inhibits the expression of proinflammatory macrophage markers (iNOS, phagocytosis, CD11c) in BMDMs[3].

Seselin (5-20 μM; 0.5-6 h) blocks the STAT1 signalling pathway[3].

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

RT-PCR[3]

Cell Line:	Bone marrow-derived macrophages (BMDMs)
Concentration:	5, 10 and 20 μM
Incubation Time:	6 h
Result:	Reduced the mRNA for cytokines (IL-1β, IL-6, Tnf-α and IL-23) and chemokines (Ccl3, Ccl7, Cxcl9 and Cxcl11) concentration-dependently in BMDMs.

Western Blot Analysis[3]

Cell Line:	BMDMs
Concentration:	5, 10 and 20 μM
Incubation Time:	0.5, 1.5, 3 and 6 h
Result:	Suppressed expression of p-STAT1 and p-p65 both concentration and time dependently.

In Vivo

Seselin (0.5-40.5 mg/kg; s.c.; once) shows peripheral anti-inflammatory and antinociceptive activities in mice[2].

Seselin (3-30 mg/kg; i.g.; once) ameliorates sepsis induced by caecal ligation and puncture in mice[3].

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

Animal Model:	Male Swiss mice[2]
Dosage:	0.5, 4.5 or 40.5 mg/kg
Administration:	Subcutaneous injection; once
Result:	Inhibited the writhing response induced by acetic acid in a significant and dose-dependent manner, by 19.5%, 26.2% and 41.4% at dose of 0.5, 4.5 or 40.5 mg/kg, respectively. Elicited a significant inhibition of formalin response during the second phase (inflammatory), by 90.3%, 97.8% and 95.3%, respectively.

Animal Model:	C57BL/6 mice, caecal ligation and puncture (CLP) induced sepsis model[3]
Dosage:	3, 10 and 30 mg/kg
Administration:	Intragastric administration, once
Result:	Ameliorated lung injury and decreased JAK2 phosphorylation level in lung tissue during sepsis. Reduced the immune cell counts in BALF induced by CLP.

REFERENCES

[1]. Chou HC, et al. Cytotoxic and anti-platelet aggregation constituents from the root wood of Melicope semecarpifolia. Planta Med. 2005 Nov;71(11):1078-81.

[2]. Lima V, et al. Antinociceptive activity of the pyranocoumarin seselin in mice. Fitoterapia. 2006 Dec;77(7-8):574-8.Lima V, et al. Antinociceptive activity of the pyranocoumarin seselin in mice. Fitoterapia. 2006 Dec;77(7-8):574-8.Lima V, et al. Antinociceptive activity of the pyranocoumarin seselin in mice. Fitoterapia. 2006 Dec;77(7-8):574-8.

[3]. Feng L, et al. Seselin ameliorates inflammation via targeting Jak2 to suppress the proinflammatory phenotype of macrophages. Br J Pharmacol. 2019 Jan;176(2):317-333.

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