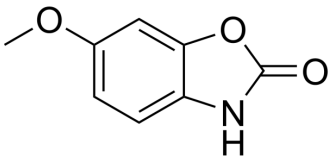
Coixol

Cat. No.:	HY-N0936
CAS No.:	532-91-2
Molecular Formula:	$C_8H_7NO_3$
Molecular Weight:	165.15
Target:	Others
Pathway:	Others

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (605.51 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	6.0551 mL	30.2755 mL	60.5510 mL
	5 mM	1.2110 mL	6.0551 mL	12.1102 mL
	10 mM	0.6055 mL	3.0276 mL	6.0551 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 (15.14 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (15.14 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Coixol (6-Methoxy-2-benzoxazolinone; 6-MBOA) is a potent and orally active anti-inflammatory agent. Coixol decreases the iNOS protein expression. Coixol inhibits the production of TNF-α, IL-6, and IL-1β. Coixol improves glucose tolerance and plasma insulin. Coixol decreases the blood glucose level[1][2][3].

In Vitro

Coixol (5, 10, 20 μM, 2+24 h) decreases the iNOS protein expression in LPS-induced RAW264.7 Cells[2].
Coixol (0.03, 0.1, 0.3, 1, 3, 10, 30, 100 μM; 1+24 h) inhibits the production of TNF-α, IL-6, and IL-1β with IC_{50}s of 31.2, 48.9, 66.4 μM, respectively[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[2]

Cell Line:	RAW264.7 cells
Concentration:	5, 10, 20 μM
Incubation Time:	2 h and then stimulated with or without LPS (0.5 μg/mL) for 24 h
Result:	Decreased the iNOS protein expression in a dose dependent manner.

In Vivo

Coixol (25, 50 mg/kg, p.o.) improves glucose tolerance and stimulates glucose-induced plasma insulin in non-diabetic and diabetic rats[3].

Coixol (25, 50 mg/kg, p.o.; daily for 15 day) decreases the blood glucose levels in a dose- and time-dependent manner in type 2 diabetic rats[3].

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

Animal Model:	9–12 weeks, Sprague Dawley (SD) male rats[3]
Dosage:	25, 50 mg/kg
Administration:	P.o.
Result:	Decreased the blood glucose levels significantly, improved glucose tolerance.

CUSTOMER VALIDATION

- Planta Medica International Open. 2022; 9(01): e108-e115.

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REFERENCES

[1]. Cui E, et al. Discovery of Coixol Derivatives as Potent Anti-inflammatory Agents. J Nat Prod. 2023 Aug 25;86(8):1950-1959.

[2]. Hameed A, et al. Coixol amplifies glucose-stimulated insulin secretion via cAMP mediated signaling pathway. Eur J Pharmacol. 2019 Sep 5;858:172514.

[3]. Yusheng Hu, et al. Coixol Suppresses NF-κB, MAPK Pathways and NLRP3 Inflammasome Activation in Lipopolysaccharide-Induced RAW 264.7 Cells. Molecules

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