Corylin

Cat. No.: HY-N0236

CAS No.: 53947-92-5

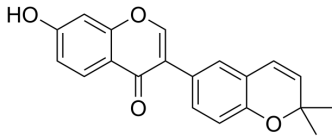
Molecular Formula: $C_{20}H_{16}O_4$

Molecular Weight: 320.34

Target: Antibiotic; STAT

Pathway: Anti-infection; JAK/STAT Signaling; Stem Cell/Wnt

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



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (312.17 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.1217 mL	15.6084 mL	31.2168 mL
5 mM	0.6243 mL	3.1217 mL	6.2434 mL
10 mM	0.3122 mL	1.5608 mL	3.1217 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 15% Cremophor EL >> 85% Saline
   Solubility: 50 mg/mL (156.08 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 0.5% CMC-Na/saline water
   Solubility: 25 mg/mL (78.04 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.80 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Corylin is an orally active flavonoid anti-inflammatory and osteogenic agent that inhibits IL-6-induced STAT3 promoter activity and STAT3 phosphorylation. Corylin also has anticancer, antiatherosclerotic, and ameliorating activity in hyperlipidemia and insulin resistance, inducing adipocyte browning and lipolysis through SIRT1 or β3-AR-dependent pathways[1][2][3].

In Vitro

Corylin (3-300 μM, 0-72 h) inhibits the proliferation of HepG2 and Huh7 cells[2].
Corylin (3-30 μM, 0-48 h) inhibits the migration and invasiveness of HepG2 and Huh7 cells by suppressing EMT[2].
Corylin (5-200 μM, 24 h) reduces the viability of 3T3-L1 preadipocytes at the doses of 100-200 μM[3].

Corylin (10 μM, 24 h) induces browning via the SIRT1 and β3-AR pathways in 3T3-L1 adipocytes[3].

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

Western Blot Analysis[2]

Cell Line:	HepG2 and Huh7 cells
Concentration:	3-30 μM
Incubation Time:	24-48 h
Result:	Reduced the expression of EMT-promoting proteins such as N-cadherin, vimentin, slug, and twist.

In Vivo

Corylin (60 mg/kg, i.p., three times a week, 4 weeks) inhibits tumor growth in Huh7 cells xenograft mice[3].

Corylin (50-100 mg/kg, p.o., daily, 9 weeks) improves the high-fat diet (HFD)-induced obesity in HFD- and DIO-treated mice[3].

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

Animal Model:	HFD- and DIO-treated mice[3]
Dosage:	50-100 mg/kg
Administration:	Oral gavage (p.o.), daily, 9 weeks
Result:	Reduced the weight of subcutaneous, visceral WAT, and body. Decreased the size of WAT adipocyte. Increased insulin sensitivity, mitochondrial biogenesis, and β-oxidation. Reduced serum levels of insulin and leptin and improved HOMA-IR.

CUSTOMER VALIDATION

- Acta Pharm Sin B. 2021 Jan;11(1):143-155.
- Cell Rep Med. April 20, 2022.
- Phytomedicine. 2022: 154627.
- J Ethnopharmacol. 2022 Aug 13;115593.

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REFERENCES

[1]. Lee SW, et al. Phenolic compounds isolated from Psoralea corylifolia inhibit IL-6-induced STAT3 activation. Planta Med. 2012 Jun;78(9):903-6.

[2]. Chen CC, et al. Corylin reduces obesity and insulin resistance and promotes adipose tissue browning through SIRT-1 and β3-AR activation. Pharmacol Res. 2021 Feb;164:105291.

[3]. Chen CY, et al. Corylin Suppresses Hepatocellular Carcinoma Progression via the Inhibition of Epithelial-Mesenchymal Transition, Mediated by Long Noncoding RNA GAS5. Int J Mol Sci. 2018 Jan 27;19(2):380.

Caution: Product has not been fully validated for medical applications. For research use only.

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