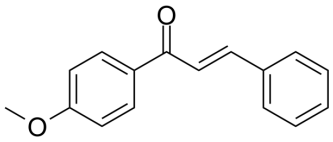
4'-Methoxychalcone

Cat. No.:	HY-128400
CAS No.:	959-23-9
Molecular Formula:	$C_{16}H_{14}O_2$
Molecular Weight:	238.28
Target:	PARP
Pathway:	Cell Cycle/DNA Damage; Epigenetics
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (209.84 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	4.1967 mL	20.9837 mL	41.9674 mL
	5 mM	0.8393 mL	4.1967 mL	8.3935 mL
	10 mM	0.4197 mL	2.0984 mL	4.1967 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (10.49 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

4'-Methoxychalcone regulates adipocyte differentiation through PPARγ activation. 4'-Methoxychalcone modulates the expression and secretion of various adipokines in adipose tissue that are involved in insulin sensitivity[1].

IC_{50} & Target

PPARγ[1]

In Vitro

4'-Methoxychalcone (5 μM; 8 days) markedly increases the mRNA expression of adipogenic genes during adipocyte differentiation, PPARγ, aP2, FAS, adiponectin and GluT 4[1].

4'-Methoxychalcone (5 μM; 8 days) reduces the upregulated mRNA expression of IL-6, PAI-1, and MCP-1 by TNF-α in preadipocyte 3T3-L1 cells[1].

4'-Methoxychalcone (5 μM; 0-8 days) causes an increase in PPARγ expression during differentiation, while C/EBPβ protein expression is relatively unaffected[1].

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

RT-PCR[1]

Cell Line:	Preadipocyte 3T3-L1 cells
Concentration:	5 μM
Incubation Time:	0 day; 2 days; 4 days; 6 days; 8 days
Result:	Increased the mRNA expression of all adipogenic genes, except GluT1 in adipocyte.

Western Blot Analysis[1]

Cell Line:	Preadipocyte 3T3-L1 cells
Concentration:	5 μM
Incubation Time:	8 days
Result:	Increased PPARγ expression in adipocyte.

REFERENCES

[1]. Han Y, et al. Regulatory effects of 4-methoxychalcone on adipocyte differentiation through PPARγ activation and reverse effect on TNF-α in 3T3-L1 cells. Food Chem Toxicol. 2017 Aug;106(Pt A):17-24.

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