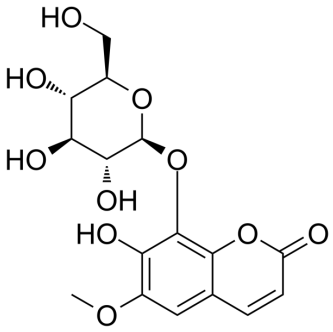
Fraxin

Cat. No.:	HY-N0579
CAS No.:	524-30-1
Molecular Formula:	$C_{16}H_{18}O_{10}$
Molecular Weight:	370.31
Target:	Phosphodiesterase (PDE)
Pathway:	Metabolic Enzyme/Protease
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (675.11 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.7004 mL	13.5022 mL	27.0044 mL
	5 mM	0.5401 mL	2.7004 mL	5.4009 mL
	10 mM	0.2700 mL	1.3502 mL	2.7004 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: ≥ 2.25 mg/mL (6.08 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (5.62 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Fraxin isolated from Cortex Fraxini, is a glucoside of fraxetin and reported to exert potent anti-oxidative stress action[1], anti-inflammatory and antimetastatic properties. Fraxin shows its antioxidative effect through inhibition of cyclo AMP phosphodiesterase enzyme[2].

IC_{50} & Target

Cyclo AMP phosphodiesterase enzyme[2].

In Vitro

Fraxin (100 μM) is non-cytotoxic on Hep G2 cells. Fraxin at non-cytotoxic concentrations significantly decreases the t-BHP-induced ROS generation in a dose-dependent manner[1].

Fraxin (0.5 mM) shows free radical scavenging effect at high concentration and cell protective effect against H_2O_2-mediated oxidative stress[2].

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

In Vivo	Fraxin (50 mg/kg, p.o.) significantly blocks the CCl_4-induced elevation of ALT and AST. Fraxin (10 and 50 mg/kg, p.o.) significantly reduces the GSSG levels (1.7±0.3 and 1.5±0.2 nM/g liver, respectively) compared with the GSSG levels of the CCl_4-treated group[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Brain Res Bull. 2022 Jun 27;S0361-9230(22)00155-1.

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REFERENCES

[1]. Fraxin (50 mg/kg, p.o.) significantly blocks the CCl_4-induced elevation of ALT and AST. Fraxin (10 and 50 mg/kg, p.o.) significantly reduces the GSSG levels (1.7±0.3 and 1.5±0.2 nM/g liver, respectively) compared with the GSSG levels of the CCl_4-treated group[1].

[2]. Whang WK, et al. Natural compounds,fraxin and chemicals structurally related to fraxin protect cells from oxidative stress. Exp Mol Med. 2005 Oct 31;37(5):436-46.

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