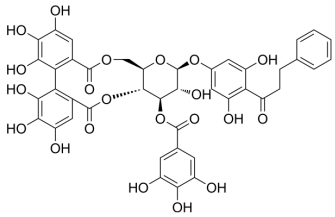
Thonningianin A

Cat. No.:	HY-N4084
CAS No.:	271579-11-4
Molecular Formula:	$C_{42}H_{34}O_{21}$
Molecular Weight:	874.71
Target:	Apoptosis
Pathway:	Apoptosis
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 (114.32 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.1432 mL	5.7162 mL	11.4324 mL
	5 mM	0.2286 mL	1.1432 mL	2.2865 mL
	10 mM	0.1143 mL	0.5716 mL	1.1432 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 (2.86 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (2.86 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Thonningianin A, an ellagitannin, is isolated from the methanolic extract of the African medicinal herb, Thonningia sanguinea. The antioxidant properties of Th A involve radical scavenging, anti-superoxide formation and metal chelation. Anti-cancer activities[1][2].

In Vitro

Thonningianin A effectively inhibited the proliferation of HepG-2 cells by inducing apoptosis, as evidenced by increase in the sub-G1 cell population, DNA fragmentation, and increase in the content of reactive oxygen species[2].

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

REFERENCES

[1]. Gyamfi MA, et al. Antioxidant properties of Thonningianin A, isolated from the African medicinal herb, Thonningia sanguinea. Biochem Pharmacol. 2002 May 1;63(9):1725-37.

[2]. Zhang TT, et al. Effects of thonningianin A in natural foods on apoptosis and cell cycle arrest of HepG-2 human hepatocellular carcinoma cells. Food Funct. 2015 Aug;6(8):2588-97.

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

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