# Crustecdysone

**Cat. No.:** HY-N6979

**CAS No.:** 5289-74-7

**Molecular Formula:** $C_{27}H_{44}O_7$

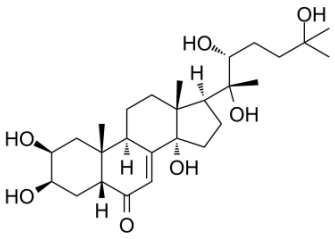
**Molecular Weight:** 480.63

**Target:** Caspase; Autophagy; Endogenous Metabolite

**Pathway:** Apoptosis; Autophagy; 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 : 100 mg/mL (208.06 mM; Need ultrasonic)

| Preparing Stock Solutions | Mass / Solvent / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 2.0806 mL | 10.4030 mL | 20.8060 mL |
| | 5 mM | 0.4161 mL | 2.0806 mL | 4.1612 mL |
| | 10 mM | 0.2081 mL | 1.0403 mL | 2.0806 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: ≥ 2.08 mg/mL (4.33 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (4.33 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.33 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

Crustecdysone (20-Hydroxyecdysone) is a naturally occurring ecdysteroid hormone isolated from Cyanotis arachnoides C.B.Clarke which controls the ecdysis (moulting) and metamorphosis of arthropods, it inhibits caspase activity and induces autophagy via the 20E nuclear receptor complex, EcR-USP[1]. Crustecdysone exhibits regulatory or protective roles in the cardiovascular system[2]. Crustecdysone is an active metabolite of Ecdysone (α-Ecdysone; HY-N0179)[3]

**$IC_{50}$ & Target**

Human Endogenous Metabolite

## REFERENCES

[1]. Liu H, et al. E93 predominantly transduces 20-hydroxyecdysone signaling to induce autophagy and caspase activity in Drosophila fat body. Insect Biochem Mol Biol. 2014 Feb;45:30-9.

[2]. Phungphong S, et al. 20-Hydroxyecdysone attenuates cardiac remodeling in spontaneously hypertensive rats. Steroids. 2017 Oct;126:79-84.

[3]. Minglei Lu, et al. Ecdysone Elicits Chronic Renal Impairment via Mineralocorticoid-Like Pathogenic Activities. Cell Physiol Biochem. 2018;49(4):1633-1645.



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