Diphlorethohydroxycarmalol

Cat. No.: HY-N10413

CAS No.: 138529-04-1

Molecular Formula: $C_{24}H_{16}O_{13}$

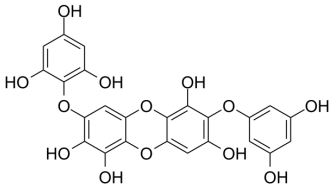
Molecular Weight: 512.38

Target: Glucosidase

Pathway: Metabolic Enzyme/Protease

Storage: -20°C, protect from light

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



SOLVENT & SOLUBILITY

In Vitro

H_2O : 10 mg/mL (19.52 mM; Need ultrasonic and warming)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.9517 mL	9.7584 mL	19.5168 mL
	5 mM	0.3903 mL	1.9517 mL	3.9034 mL
	10 mM	0.1952 mL	0.9758 mL	1.9517 mL

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

BIOLOGICAL ACTIVITY

Description

Diphlorethohydroxycarmalol, a kind of phlorotannin, is an orally active α-glucosidase and α-amylase inhibitor with IC_{50}s of 0.16 mM and 0.53 mM, respectively. Diphlorethohydroxycarmalol has anti-diabetic activities[1].

IC_{50} & Target

IC50: 0.16 mM (α-glucosidase) and 0.53 mM (α-amylase) [1]

In Vivo

The increase of postprandial blood glucose levels are significantly suppressed in the Diphlorethohydroxycarmalol-administered group than those in the streptozotocin-induced diabetic or normal mice. Moreover, the area under curve (AUC) is significantly reduced via Diphlorethohydroxycarmalol (100 mg/kg; p.o.) administration (2022 versus 2210 mmol x min/lL) in the diabetic mice as well as it delays absorption of dietary carbohydrates[1].

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

REFERENCES

[1]. Soo-Jin Heo, et al. Diphlorethohydroxycarmalol isolated from Ishige okamurae, a brown algae, a potent alpha-glucosidase and alpha-amylase inhibitor, alleviates

postprandial hyperglycemia in diabetic mice. Eur J Pharmacol. 2009 Aug 1;615(1-3):252-6.

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