Caraphenol A

Cat. No.: HY-N3540

CAS No.: 354553-35-8

Molecular Formula: $C_{42}H_{28}O_9$

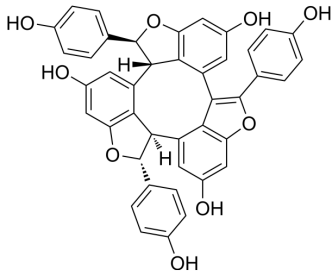
Molecular Weight: 676.67

Target: Others

Pathway: Others

Storage: 4°C, protect from light

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



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (73.89 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.4778 mL	7.3891 mL	14.7783 mL
	5 mM	0.2956 mL	1.4778 mL	2.9557 mL
	10 mM	0.1478 mL	0.7389 mL	1.4778 mL

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

BIOLOGICAL ACTIVITY

Description

Caraphenol A is a resveratrol trimer and is able to transiently reduce interferon-induced transmembrane (IFITM) protein expression. Caraphenol A safely enhances lentiviral vector gene delivery to hematopoietic stem and progenitor cells[1]. Caraphenol A also inhibits human cystathionine β-synthase (hCBS) and human cystathionine γ- lyase (hCSE) with IC_{50}s of 5.9 μM and 12.1 μM, respectively[2].

IC_{50} & Target

IFITM2, IFITM3[1]

IC50: 5.9 μM (hCBS), 12.1 μM (hCSE)[2]

In Vitro

Caraphenol A (0-50 μM; 8 h) enhances lentiviral vector (LV) gene delivery to HeLa, but not HEK293T cells[1].

Caraphenol A decreases interferon induced transmembrane protein-mediated restriction in an endosomal trafficking dependent manner[1].

Caraphenol A treatment significantly improves hematopoietic stem cell (HSC) gene delivery at both low and high LV doses without altering LV integration patterns[1].

Caraphenol A (30 μM; 6 h) treatment facilitates lentiviral escape from endosomes[1].

Caraphenol A (30 μM; 4 h) alters expression and subcellular localization of IFITM2/3 protein and late endosomes in HeLa cells. The effect on late endosome is dependent on IFITM3 expression[1].

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

In Vivo	Caraphenol A-treated (30 μM; pretreated for 4 h) HSCs maintain improved gene marking in mice without altering lentiviral integration profiles[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Ozog S, et al. Resveratrol trimer enhances gene delivery to hematopoietic stem cells by reducing antiviral restriction at endosomes. Blood. 2019 Oct 17;134(16):1298-1311.

[2]. Niu W, et al. Discovery of selective cystathionine β-synthase inhibitors by high-throughput screening with a fluorescent thiol probe. Medchemcomm. 2016 Nov 15;8(1):198-201.

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