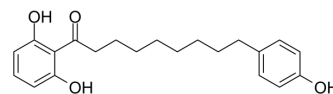


Malabaricone B

Cat. No.:	HY-N8517
CAS No.:	63335-24-0
Molecular Formula:	C ₂₁ H ₂₆ O ₄
Molecular Weight:	342.43
Target:	Glucosidase; Apoptosis
Pathway:	Metabolic Enzyme/Protease; 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 (292.03 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent		1 mg	5 mg	10 mg
	Concentration	Mass			
	1 mM		2.9203 mL	14.6015 mL	29.2030 mL
	5 mM		0.5841 mL	2.9203 mL	5.8406 mL
	10 mM		0.2920 mL	1.4602 mL	2.9203 mL

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

BIOLOGICAL ACTIVITY

Description

Malabaricone B, a naturally occurring plant phenolic, is an orally active α -glucosidase inhibitor with an IC₅₀ of 63.7 μ M. Malabaricone B has anticancer, antimicrobial, anti-oxidation and antidiabetic activities^{[1][2][3]}.

In Vitro

Malabaricone B shows selective toxicity to human lung cancer (A549), malignant melanoma (A375) and T cell leukemia (Jurkat) cell lines, without showing toxicity to human normal intestinal (INT407), human kidney (HEK293) and lung fibroblast (WI-38) cells. Among the chosen cancer cell lines, Malabaricone B shows maximum cytotoxicity to the A549 cells (IC₅₀ = 8.1 μ M), which is significantly better than that of curcumin (IC₅₀ = 26.7 μ M)^[1].
The Malabaricone B-induced apoptosis is mediated by an increase in the intracellular reactive oxygen species (ROS). Malabaricone B (2.5, 5, 10 and 20 μ M) increases the BAX level while simultaneously decreasing the BCL-2 and BCL-XL levels in the A549 cells, triggering the mitochondrial apoptotic pathway as revealed from the release of cytochrome c, and the activation of caspase-9 and caspase-3^[1].
Malabaricone B exhibits a good level of antimicrobial activity when tested against a variety of microorganisms, including Staphylococcus aureus and Candida albicans^[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Malabaricone B (100 mg/kg; p.o; alternate day, 23 days) inhibits lung tumor (xenograft) growth in SCID mice^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Mrityunjay Tyagi, et al. Spice-derived phenolic, malabaricone B induces mitochondrial damage in lung cancer cells via a p53-independent pathway. *Food Funct.* 2018 Nov 14;9(11):5715-5727.
- [2]. K Y Orabi, et al. Isolation and characterization of two antimicrobial agents from mace (*Myristica fragrans*). *J Nat Prod.* May-Jun 1991;54(3):856-9.
- [3]. B Prabha, et al. Antidiabetic potential of phytochemicals isolated from the stem bark of *Myristica fatua* Houtt. var. *magnifica* (Bedd.) Sinclair. *Bioorg Med Chem.* 2018 Jul 23;26(12):3461-3467.
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Caution: Product has not been fully validated for medical applications. For research use only.

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