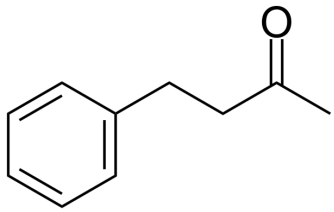
Benzylacetone

Cat. No.:	HY-W015616
CAS No.:	2550-26-7
Molecular Formula:	$C_{10}H_{12}O$
Molecular Weight:	148.21
Target:	Tyrosinase
Pathway:	Metabolic Enzyme/Protease
Storage:	Pure form -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (674.72 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	6.7472 mL	33.7359 mL	67.4718 mL
	5 mM	1.3494 mL	6.7472 mL	13.4944 mL
	10 mM	0.6747 mL	3.3736 mL	6.7472 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 (16.87 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (16.87 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (16.87 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Benzylacetone is an aromatic compound from agarwood[1]. Benzylacetone exhibits potent and reversible antityrosinase (mushroom) activity with IC_{50}s of 2.8 mM and 0.6 mM for monophenolase and diphenolase, respectively[2]. Benzylacetone has appetite-enhancing and locomotor-reducing effects[3].

IC_{50} & Target

IC50: 2.8 mM (monophenolase, tyrosinase mushroom), 0.6 mM (diphenolase, tyrosinase mushroom)[2]

REFERENCES

[1]. Takamatsu S, et al. Agarotetrol: a source compound for low molecular weight aromatic compounds from agarwood heating. J Nat Med. 2018 Mar;72(2):537-541.

[2]. Liu X, et al. Inhibition effects of benzylideneacetone, benzylacetone, and 4-phenyl-2-butanol on the activity of mushroom tyrosinase. J Biosci Bioeng. 2015 Mar;119(3):275-9.

[3]. Ogawa K, et al. Appetite-Enhancing Effects: The Influence of Concentrations of Benzylacetone and trans-Cinnamaldehyde and Their Inhalation Time, as Well as the Effect of Aroma, on Body Weight in Mice. Biol Pharm Bull. 2016;39(5):794-8.

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

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