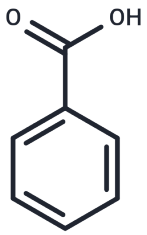
Data Sheet (Cat.No.T0833)

TargetMol

Benzoic acid

Chemical Properties



CAS No. : 65-85-0

Formula: C7H6O2

Molecular Weight: 122.12

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Benzoic acid (Dracylic acid) is a fungistatic compound that is widely used as a food preservative. It is conjugated to GLYCINE in the liver and excreted as hippuric acid.
Targets(IC50)	Endogenous Metabolite,Antibacterial,Antifungal
In vivo	Under acidic growth conditions, Benzoic acid readily enters cells where its intracellular ionization significantly reduces both the intracellular pH and the levels of adenosine triphosphatase (ATPase). Benzoic acid is susceptible to oxidation by hydroxyl radicals produced by stimulated neutrophils. The average absorption of Benzoic acid through human skin shows no difference from that in rat studies, being minimally affected by skin thickness. The maximum rate of Benzoic acid transport across human skin cell membranes is 16.54 μg/cm2 per hour, with an actual dose of 70.6% in the receptor fluid after 24 hours.

Solubility Information

Solubility	H2O: < 1 mg/mL (insoluble or slightly soluble), Ethanol: 24 mg/mL (196.53 mM),Sonication is recommended. DMSO: 250 mg/mL (2047.17 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: < 10 mg/mL (81.89 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (81.89 mM),Solution. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	8.1887 mL	40.9433 mL	81.8867 mL
5 mM	1.6377 mL	8.1887 mL	16.3773 mL
10 mM	0.8189 mL	4.0943 mL	8.1887 mL
50 mM	0.1638 mL	0.8189 mL	1.6377 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Tsuji A, et al. Pharm Res, 1994, 11(1), 30-37.
Tremblay GC, et al. Pharmacol Ther, 1993, 60(1), 63-90.
Elder DJ, et al. FEMS Microbiol Rev, 1994, 13(4), 441-468.
van de Sandt JJ, et al. Regul Toxicol Pharmacol, 2004, 39(3), 271-281.