Benzoic acid-d_5

Cat. No.: HY-N0216S

CAS No.: 1079-02-3

Molecular Formula: $C_7HD_5O_2$

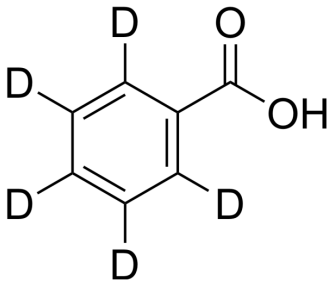
Molecular Weight: 127.15

Target: Bacterial; Fungal; Endogenous Metabolite

Pathway: Anti-infection; Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (983.09 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	7.8647 mL	39.3236 mL	78.6473 mL
	5 mM	1.5729 mL	7.8647 mL	15.7295 mL
	10 mM	0.7865 mL	3.9324 mL	7.8647 mL

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

BIOLOGICAL ACTIVITY

Description

Benzoic acid-d_5 is a deuterium substitute for Benzoic acid. Benzoic acid is an aromatic alcohol that occurs naturally in many plants and is a common additive in food, beverages, cosmetics and other products. Benzoic acid can act as a preservative by inhibiting bacteria and fungi[1][2].

In Vitro

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1].

Benzoic acid-d5 can be used for labeling and quantifying the glycopeptides of human serum IgG (hIgG)[3].

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

REFERENCES

[1]. Edward M Russak, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019 Feb;53(2):211-216. doi: 10.1177/1060028018797110. Epub 2018 Aug 23.

[2]. Nair B, et al. Final report on the safety assessment of Benzyl Alcohol, Benzoic Acid, and Sodium Benzoate. Int J Toxicol. 2001;20 Suppl 3:23-50.

[3]. Masaki Kurogochi, et al. Relative quantitation of glycopeptides based on stable isotope labeling using MALDI-TOF MS. Molecules. 2014 Jul 9;19(7):9944-61.

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