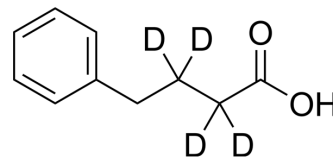


4-Phenylbutyric acid-d₂

Cat. No.:	HY-A0281S3
CAS No.:	461391-24-2
Molecular Formula:	C ₁₀ H ₈ D ₄ O ₂
Molecular Weight:	168.23
Target:	HDAC; Virus Protease
Pathway:	Cell Cycle/DNA Damage; Epigenetics; Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	4-Phenylbutyric acid-d ₂ is the deuterium labeled 4-Phenylbutyric acid[1]. 4-Phenylbutyric acid (4-PBA) is an inhibitor of HDAC and endoplasmic reticulum (ER) stress, used in cancer and infection research.
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] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother*. 2019 Feb;53(2):211-216.
- [2]. Chang TH, et al. Enhanced growth inhibition by combination differentiation therapy with ligands of peroxisome proliferator-activated receptor-gamma and inhibitors of histone deacetylase in adenocarcinoma of the lung. *Clin Cancer Res*. 2002 Apr;8(4):1206-12.
- [3]. Frouco G, et al. Sodium phenylbutyrate abrogates African swine fever virus replication by disrupting the virus-induced hypoacetylation status of histone H3K9/K14. *Virus Res*. 2017 Oct 15242:24-29.
- [4]. Park HJ, et al. 4-Phenylbutyric acid protects against lipopolysaccharide-induced bone loss by modulating autophagy in osteoclasts. *Biochem Pharmacol*. 2018 May151:9-17.

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

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