# Phytanic acid-$d_3$

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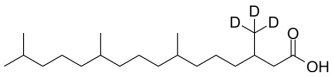
| **Cat. No.:** | HY-113067S |
| **CAS No.:** | 1383920-40-8 |
| **Molecular Formula:** | $C_{20}H_{37}D_3O_2$ |
| **Molecular Weight:** | 315.55 |
| **Target:** | Endogenous Metabolite |
| **Pathway:** | Metabolic Enzyme/Protease |
| **Storage:** | Pure form -20°C 3 years<br>4°C 2 years<br>In solvent -80°C 6 months<br>-20°C 1 month |




## BIOLOGICAL ACTIVITY

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| **Description** | Phytanic acid-$d_3$ is the deuterium labeled Phytanic acid[1]. Phytanic acid is an endogenous metabolite present in Blood that can be used for the research of Zellweger Syndrome, Alpha Methylacyl CoA Racemase Deficiency, Rhizomelic Chondrodysplasia Punctata and Infantile Refsum Disease[2][3][4][5][6]. |
| **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].<br>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]. Budden SS, et al. Dysmorphic syndrome with phytanic acid oxidase deficiency, abnormal very long chain fatty acids, and pipecolic acidemia: studies in four children. J Pediatr. 1986 Jan;108(1):33-9.

[3]. McLean BN, et al. A new defect of peroxisomal function involving pristanic acid: a case report. J Neurol Neurosurg Psychiatry. 2002 Mar72(3):396-9.

[4]. Baumgartner MR, et al. Clinical approach to inherited peroxisomal disorders: a series of 27 patients. Ann Neurol. 1998 Nov44(5):720-30.

[5]. Poll-The BT, et al. Infantile Refsum's disease: biochemical findings suggesting multiple peroxisomal dysfunction. J Inherit Metab Dis. 19869(2):169-74.

[6]. Lee N, et al. Endogenous toxic metabolites and implications in cancer therapy. Oncogene. 2020 Aug39(35):5709-5720.



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