

Product Data Sheet

Product Name: 3-Methylvaleric acid-d 11

Cat. No.: GC80475

Chemical Properties

Cas. No.

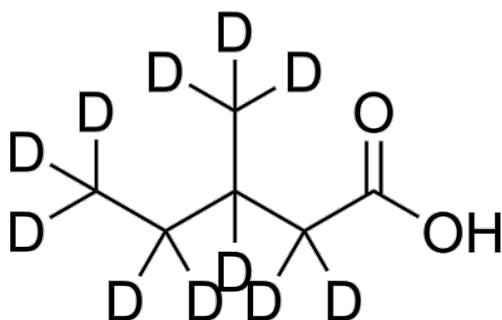
Formula $C_6HD_{11}O_2$ M.Wt 127.23

Solubility DMSO: ≥ 50 mg/mL (392.99 mM) Storage Store at $-20^{\circ}C$

General tips For obtaining a higher solubility, please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

3-Methylvaleric acid-d 11 is the deuterium labeled 3-Methylvaleric Acid. 3-Methylvaleric Acid is a branched alkanoic acid. 3-Methylvaleric Acid can be utilized by *Pseudomonas citronettotis* as a sole carbon source for its growth. 3-Methylvaleric Acid derivatives exhibit anti-hyperalgesic and anticonvulsant activities [1] [2] [3].

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

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drugs.

References:

- [1]. Lau E P, et al. Alternate microbial strategies for the metabolism of a 3-methyl branched alkanoic acid. *Current Microbiology*, 1980, 4: 163-167.
- [2]. Lin YH, et al. Models incorporating physical, laboratory and gut metabolite markers can be used to predict severe hepatic steatosis in MAFLD patients. *Kaohsiung J Med Sci*. 2024 Dec;40(12):1095-1105.
- [3]. Kaufmann D, et al. Synthesis and evaluation of antiallodynic and anticonvulsant activity of novel amide and urea derivatives of valproic acid analogues. *J Med Chem*. 2009 Nov 26;52(22):7236-48.

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