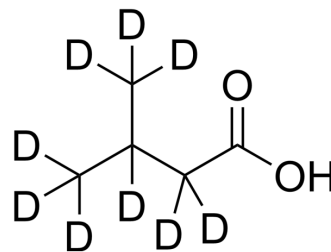


Isovaleric acid-d₉

Cat. No.:	HY-W012980S		
CAS No.:	344298-81-3		
Molecular Formula:	C ₅ HD ₉ O ₂		
Molecular Weight:	111.19		
Target:	Endogenous Metabolite		
Pathway:	Metabolic Enzyme/Protease		
Storage:	Pure form	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (899.36 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	8.9936 mL	44.9681 mL	89.9361 mL
		5 mM	1.7987 mL	8.9936 mL	17.9872 mL
10 mM		0.8994 mL	4.4968 mL	8.9936 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (22.48 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (22.48 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (22.48 mM); Clear solution 				

BIOLOGICAL ACTIVITY

Description	Isovaleric acid-d ₉ is the deuterium labeled Isovaleric acid. Isovaleric acid is a natural fatty acid and known to effect on neonatal death and possible Jamaican vomiting sickness in human.
In Vitro	<p>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].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.
- [2]. Ackman RG, et al. Birthweights in the Faroe Islands: possible role of isovaleric acid. *J Intern Med.* 1989 Feb;225(2):73-5.
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Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA