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Produktinformation



Forschungsprodukte & Biochemikalien



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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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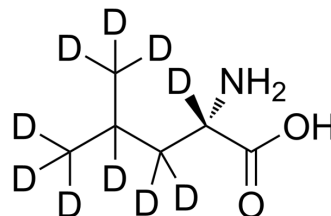
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L-Leucine-d₁₀

Cat. No.:	HY-N0486S
CAS No.:	106972-44-5
Molecular Formula:	C ₆ H ₃ D ₁₀ NO ₂
Molecular Weight:	141.23
Target:	mTOR; Endogenous Metabolite
Pathway:	PI3K/Akt/mTOR; Metabolic Enzyme/Protease
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

H₂O : 16.67 mg/mL (118.03 mM; Need ultrasonic)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	7.0806 mL	35.4032 mL	70.8065 mL
	5 mM	1.4161 mL	7.0806 mL	14.1613 mL
	10 mM	0.7081 mL	3.5403 mL	7.0806 mL

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

BIOLOGICAL ACTIVITY

Description

L-Leucine-d₁₀ is the deuterium labeled L-Leucine. L-Leucine is an essential branched-chain amino acid (BCAA), which activates the mTOR signaling pathway[1].

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]. Baoshan Xu, et al. Stimulation of mTORC1 with L-leucine rescues defects associated with Roberts syndrome. *PLoS Genet.* 2013;9(10):e1003857.
- [2]. Bruckbauer A, et al. Synergistic effects of leucine and resveratrol on insulin sensitivity and fat metabolism in adipocytes and mice. *Nutr Metab (Lond).* 2012 Aug 22;9(1):77.
- [3]. Rachdi L, et al. L-leucine alters pancreatic β -cell differentiation and function via the mTor signaling pathway. *Diabetes.* 2012 Feb;61(2):409-17.

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

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