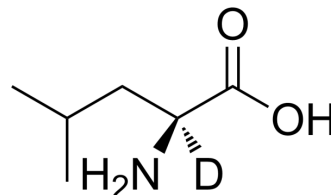


L-Leucine-d

Cat. No.:	HY-N0486S11
CAS No.:	89836-93-1
Molecular Formula:	C ₆ H ₁₂ DNO ₂
Molecular Weight:	132.18
Target:	mTOR; Endogenous Metabolite
Pathway:	PI3K/Akt/mTOR; Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	L-Leucine-d 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.
- [4]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

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

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