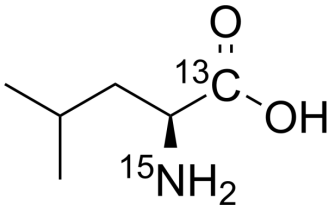
L-Leucine-1-^{13}C,^{15}N

Cat. No.:	HY-N0486S7
CAS No.:	80134-83-4
Molecular Formula:	$C_5{}^{13}CH_{13}{}^{15}NO_2$
Molecular Weight:	133.16
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

PBS (pH 7.2) : ≥ 1 mg/mL (7.51 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	7.5098 mL	37.5488 mL	75.0976 mL
5 mM	1.5020 mL	7.5098 mL	15.0195 mL
10 mM	---	---	---

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

BIOLOGICAL ACTIVITY

Description

L-Leucine-1-^{13}C,^{15}N is the ^{13}C- and ^{15}N-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]. 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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