L-Arginine-^{13}C$_6$,^{15}N$_4$ hydrochloride

Cat. No.:	HY-N0455AS8
CAS No.:	202468-25-5
Molecular Formula:	$^{13}C_6H_{15}Cl^{15}N_4O_2$
Molecular Weight:	220.59
Target:	NO Synthase; Endogenous Metabolite
Pathway:	Immunology/Inflammation; 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)
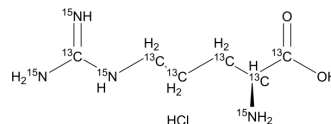
SOLVENT & SOLUBILITY

In Vitro	H$_2$O : 125 mg/mL (566.66 mM; Need ultrasonic)
	H$_2$O : 125 mg/mL (566.66 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent Concentration	1 mg	5 mg	10 mg
	1 mM	4.5333 mL	22.6665 mL	45.3330 mL
	5 mM	0.9067 mL	4.5333 mL	9.0666 mL
	10 mM	0.4533 mL	2.2666 mL	4.5333 mL

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

BIOLOGICAL ACTIVITY

Description	L-Arginine-^{13}C$_6$,^{15}N$_4$ (hydrochloride) is the ^{13}C- and ^{15}N-labeled L-Arginine hydrochloride. L-Arginine hydrochloride ((S)-(+)-Arginine hydrochloride) is the nitrogen donor for synthesis of nitric oxide, a potent vasodilator that is deficient during times of sickle cell crisis.
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.