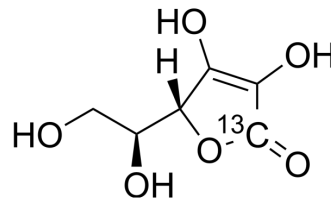


L-Ascorbic acid-¹³C

Cat. No.:	HY-B0166S1
CAS No.:	178101-88-7
Molecular Formula:	C ₅ ¹³ CH ₈ O ₆
Molecular Weight:	177.12
Target:	Apoptosis; Calcium Channel; Endogenous Metabolite; Reactive Oxygen Species
Pathway:	Apoptosis; Membrane Transporter/Ion Channel; Neuronal Signaling; Metabolic Enzyme/Protease; Immunology/Inflammation; NF-κB
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

DMSO : 100 mg/mL (564.59 mM; Need ultrasonic and warming)

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	5.6459 mL	28.2294 mL	56.4589 mL
5 mM	1.1292 mL	5.6459 mL	11.2918 mL
10 mM	0.5646 mL	2.8229 mL	5.6459 mL

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

BIOLOGICAL ACTIVITY

Description

L-Ascorbic acid-¹³C is the ¹³C-labeled L-Ascorbic acid. L-Ascorbic acid (L-Ascorbate), an electron donor, is an endogenous antioxidant agent. L-Ascorbic acid inhibits selectively Cav3.2 channels with an IC₅₀ of 6.5 μM. L-Ascorbic acid is also a collagen deposition enhancer and an elastogenesis inhibitor[1][2][3]. L-Ascorbic acid exhibits anti-cancer effects through the generation of reactive oxygen species (ROS) and selective damage to cancer cells[4].

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

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- [6]. Sebastian J Padayatty, et al. Vitamin C as an antioxidant: evaluation of its role in disease prevention. J Am Coll Nutr. 2003 Feb;22(1):18-35.
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Caution: Product has not been fully validated for medical applications. For research use only.

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