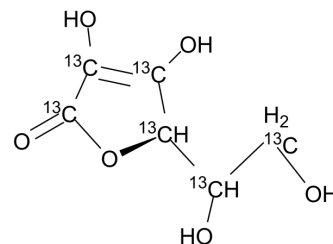


L-Ascorbic acid-¹³C₆-1

Cat. No.:	HY-B0166S8
CAS No.:	1331939-77-5
Molecular Formula:	¹³ C ₆ H ₈ O ₆
Molecular Weight:	182.08
Target:	Isotope-Labeled Compounds
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	L-Ascorbic acid- ¹³ C ₆ -1 (L-Ascorbate-1; Vitamin C- ¹³ C ₆ -1) is a ¹³ C labeled L-Ascorbic acid (HY-B0166) ^[1] . L-Ascorbic acid (L-Ascorbate), an electron donor, is an endogenous antioxidant agent. L-Ascorbic acid inhibits selectively Ca _v 3.2 channels with an IC ₅₀ of 6.5 μM. L-Ascorbic acid is also a collagen deposition enhancer and an elastogenesis inhibitor ^{[2][3][4]} . L-Ascorbic acid exhibits anti-cancer effects through the generation of reactive oxygen species (ROS) and selective damage to cancer cells ^[5] .
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 Feb;53(2):211-246.
- [2]. 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.
- [3]. Sungrae Cho, et al. Hormetic dose response to L-ascorbic acid as an anti-cancer drug in colorectal cancer cell lines according to SVCT-2 expression. *Sci Rep*. 2018 Jul 27;8(1):11372.
- [4]. Satyanarayana Sreemantula, et al. Influence of antioxidant (L- ascorbic acid) on tolbutamide induced hypoglycaemia/antihyperglycaemia in normal and diabetic rats. *BMC Endocr Disord*. 2005 Mar 3;5(1):2.
- [5]. Michael T Nelson, et al. Molecular mechanisms of subtype-specific inhibition of neuronal T-type calcium channels by ascorbate. *J Neurosci*. 2007 Nov 14;27(46):12577-83.
- [6]. Aleksander Hinek, et al. Sodium L-ascorbate enhances elastic fibers deposition by fibroblasts from normal and pathologic human skin. *J Dermatol Sci*. 2014 Sep;75(3):173-82.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA