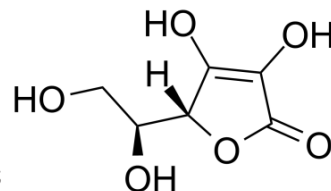


L-Ascorbic acid

Cat. No.:	HY-B0166
CAS No.:	50-81-7
Molecular Formula:	C ₆ H ₈ O ₆
Molecular Weight:	176.12
Target:	Calcium Channel; Reactive Oxygen Species; Apoptosis
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling; Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB; Apoptosis
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

H₂O : ≥ 100 mg/mL (567.79 mM)
 DMSO : 100 mg/mL (567.79 mM; Need ultrasonic)
 * "≥" means soluble, but saturation unknown.

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	5.6779 mL	28.3897 mL	56.7795 mL
	5 mM	1.1356 mL	5.6779 mL	11.3559 mL
	10 mM	0.5678 mL	2.8390 mL	5.6779 mL

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

BIOLOGICAL ACTIVITY

Description

L-Ascorbic acid (L-Ascorbate), an electron donor, is an endogenous antioxidant agent. L-Ascorbic acid inhibits selectively Ca_v3.2 channels with an IC₅₀ of 6.5 μM. L-Ascorbic acid is also a collagen deposition enhancer and an elastogenesis inhibitor^{[1][2][3]}.

CUSTOMER VALIDATION

- Antioxid Redox Signal. 2020 Dec 10;33(17):1191-1208.
- Free Radic Biol Med. 2020 Feb 1;147:220-230.
- FASEB J. 2020 Sep;34(9):11474-11487.
- J Neurosci Res. 2019 Dec;97(12):1689-1705.

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- Sci China Life Sci. 2018 Oct;61(10):1151-1167.

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REFERENCES

- [1]. 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.
- [2]. 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.
- [3]. 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.
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Caution: Product has not been fully validated for medical applications. For research use only.

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