

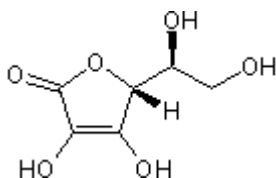
**Certificate of Analysis**[www.tocris.com](http://www.tocris.com)

**Product Name:** L-Ascorbic acid  
**CAS Number:** 50-81-7  
**IUPAC Name:** 3-Oxo-L-gulofuranolactone

**Catalog No.:** 4055      **Batch No.:** 1  
**EC Number:** 200-066-2

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>6</sub>H<sub>8</sub>O<sub>6</sub>  
**Batch Molecular Weight:** 176.12  
**Physical Appearance:** White solid  
**Solubility:** water to 500 mM  
DMSO to 100 mM  
**Storage:** Store at RT  
**Batch Molecular Structure:**

**2. ANALYTICAL DATA**

**HPLC:** Shows 100% purity  
**<sup>1</sup>H NMR:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	40.92	4.58	
Found	40.94	4.63	

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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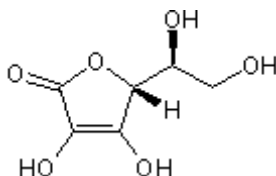
**Description:**

Inhibitor of Ca<sub>v</sub>3.2 channels (IC<sub>50</sub> = 6.5 μM); displays no effect on Ca<sub>v</sub>3.1 or Ca<sub>v</sub>3.3 channels heterologously expressed in HEK 293 cells. Also enhances the generation of induced pluripotent stem cells (iPSCs) from mouse and human somatic cells by increasing reprogramming efficiency. Naturally occurring antioxidant.

**Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>6</sub>H<sub>8</sub>O<sub>6</sub>  
Batch Molecular Weight: 176.12  
Physical Appearance: White solid

**Minimum Purity:** >99%

**Batch Molecular Structure:****References:**

**Esteban et al** (2010) Vitamin C enhances the generation of mouse and human induced pluripotent stem cells. *Cell Stem Cell* **6** 71. PMID: 20036631.

**Nelson et al** (2007) Molecular mechanisms of subtype-specific inhibition of neuronal T-type calcium channels by ascorbate. *J. Neurosci.* **27** 12577. PMID: 18003836.

**Padayatty et al** (2003) Vitamin C as an antioxidant: evaluation of its role in disease prevention. *J. Am. Coll. Nutr.* **22** 18. PMID: 12569111.

**Storage:** Store at RT

**Solubility & Usage Info:**

water to 500 mM  
DMSO to 100 mM

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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