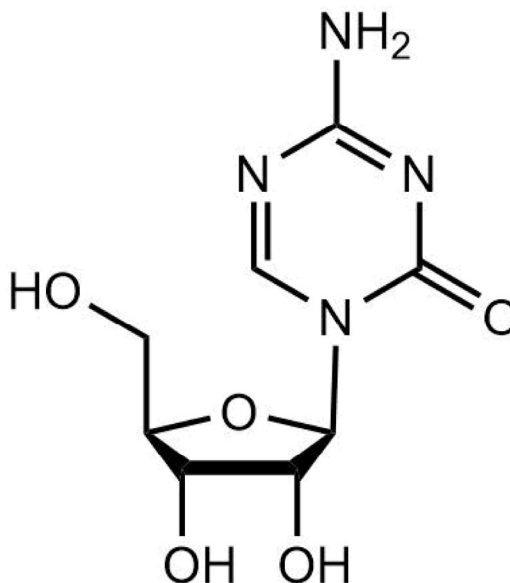


**Product Name:** 5-Azacytidine  
**CAS Number:** 320-67-2  
**IUPAC Name:** 4-Amino-1-β-D-ribofuranosyl-1,3,5-triazin-2(1H)-one

**Catalog No.:** 3842  
**Batch No.:** 5  
**EC Number:** 206-280-2

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>8</sub>H<sub>12</sub>N<sub>4</sub>O<sub>5</sub>  
**Batch Molecular Weight:** 244.2  
**Physical Appearance:** White solid  
**Solubility:** water to 50 mM  
DMSO to 100 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 99.0% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	39.35	4.95	22.94
Found	39.18	4.92	22.63

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

**Product Name:** 5-Azacytidine  
**CAS Number:** 320-67-2  
**IUPAC Name:** 4-Amino-1-β-D-ribofuranosyl-1,3,5-triazin-2(1H)-one

**Catalog No.:** 3842      **Batch No.:** 5  
**EC Number:** 206-280-2

**Description:**

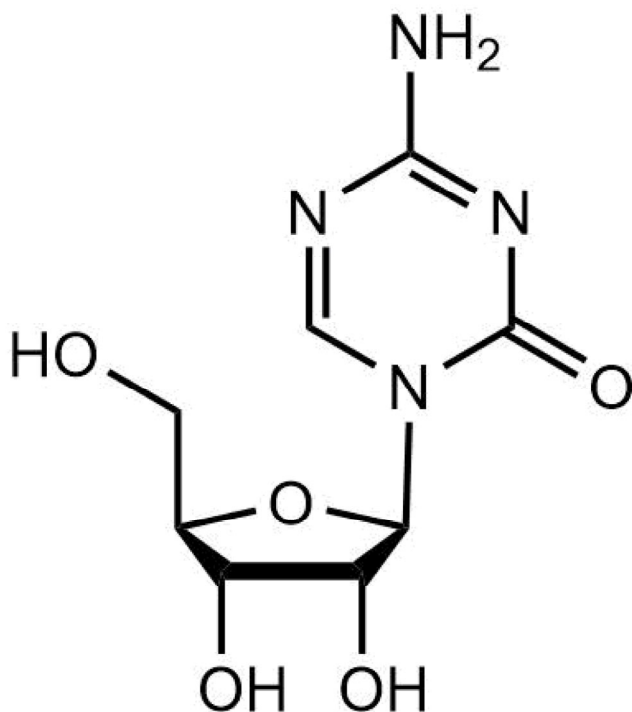
5-Azacytidine is a DNA methyltransferase inhibitor. Incorporates into DNA forming covalent adducts with cellular DNMT1, depleting enzyme activity. Induces demethylation and reactivation of silenced genes. Improves the efficiency of reprogramming of stem cells; induces differentiation of mesenchymal stem cells into cardiomyocytes.

**Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>8</sub>H<sub>12</sub>N<sub>4</sub>O<sub>5</sub>  
 Batch Molecular Weight: 244.2  
 Physical Appearance: White solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**Storage:** Store at -20°C

**Solubility & Usage Info:**

water to 50 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. \*Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

**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.

**References:**

**Qian et al** (2012) 5-Azacytidine induces cardiac differentiation of human umbilical cord-derived mesenchymal stem cells by activating extracellular regulated kinase. *Stem Cells Dev.* **21** 67. PMID: 21476855.

**Mikkelsen et al** (2008) Dissecting direct reprogramming through integrative genomic analysis. *Nature* **454** 49. PMID: 18509334.

**Schneider-Stock et al** (2005) 5-aza-Cytidine is a potent inhibitor of DNA methyltransferase 3a and induces apoptosis in HCT-116 colon cancer cells via Gadd45- and p53-dependent mechanisms. *J Pharmacol Exp Ther* **312** 525. PMID: 15547111.

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

**bio-techne.com**  
 info@bio-techne.com  
 techsupport@bio-techne.com

**North America**  
 Tel: (800) 343 7475

**China**  
 info.cn@bio-techne.com  
 Tel: +86 (21) 52380373

**Europe Middle East Africa**  
 Tel: +44 (0)1235 529449

**Rest of World**  
 www.tocris.com/distributors  
 Tel:+1 612 379 2956