

Certificate of Analysis

www.tocris.com

Product Name: Decitabine

Catalog No.: 2624

Batch No.: 3

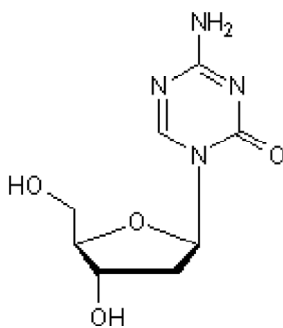
CAS Number: 2353-33-5

EC Number: 219-089-4

IUPAC Name: 4-Amino-1-(2-deoxy-β-D-*erythro*-pentofuranosyl)-1,3,5-triazin-2(1*H*)-one

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₈H₁₂N₄O₄
Batch Molecular Weight: 228.21
Physical Appearance: White solid
Solubility: water to 50 mM
DMSO to 50 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 100% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon Hydrogen Nitrogen		
Theoretical	42.1	5.3	24.55
Found	41.98	5.32	24.41

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

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Description:

Decitabine is a cytosine analog that once incorporated into DNA acts as a suicide substrate for DNA methyltransferase. Inhibits DNA methyltransferase and results in DNA hypomethylation and activation of silent genes. Chemotherapeutic agent; suppresses growth of human tumor cell lines. Demethylates differentiation-related genes; reverses embryonic stem cell differentiation. Enables generation of Chemically Induced Pluripotent Stem Cells (CiPSCs) from mouse embryonic fibroblasts (MEFs) (see protocol below). For more information about how Decitabine may be used, see our protocol: Highly Efficient Generation of CiPSCs from MEFs Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

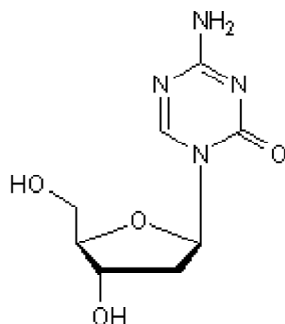
Batch Molecular Formula: C₈H₁₂N₄O₄

Batch Molecular Weight: 228.21

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



References:

Mompalmer (2005) Pharmacology of 5-aza-2'-deoxycytidine (decitabine). *Semin.Hematol.* **42** (Suppl 2) S9. PMID: 16015507.

Bender et al (1998) Inhibition of DNA methylation by 5-aza-2'-deoxycytidine suppresses the growth of human tumour cell lines. *Cancer Res.* **58** 95. PMID: 9426064.

Jackson-Grusby et al (1997) Mutagenicity of 5-aza-2'-deoxycytidine is mediated by the mammalian DNA methyltransferase. *Proc.Natl.Acad.Sci.USA* **94** 4681.

Storage: Store at +4°C

Solubility & Usage Info:

water to 50 mM

DMSO to 50 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.

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