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## DATASHEET

### 5-Azacytidine

#### Product overview

|                          |                                                                                                                                       |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b>Name</b>              | 5-Azacytidine                                                                                                                         |
| <b>Cat No</b>            | HB1374                                                                                                                                |
| <b>Alternative names</b> | 5-AzadCyd; NSC 102816; azaCyd; 5-AZC                                                                                                  |
| <b>Biological action</b> | Inhibitor                                                                                                                             |
| <b>Purity</b>            | >98%                                                                                                                                  |
| <b>Description</b>       | DNA methyltransferase inhibitor. Improves stem cell reprogramming efficiency and induces differentiation of MSCs into cardiomyocytes. |

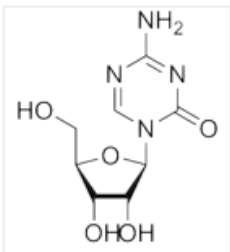
#### Biological Data

|                               |                                                                                                                                                                                                                                                                                                           |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Biological description</b> | DNA methyltransferase inhibitor. Causes hypomethylation. Inhibits Wnt- $\beta$ -catenin signaling pathway and improves stem cell reprogramming efficiency and induces differentiation of Mesenchymal Stem cells (MSCs) into cardiomyocytes. Shows anti-viral, anti-proliferative and anti-cancer actions. |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### Solubility & Handling

|                             |                                                                                                                               |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <b>Storage instructions</b> | Room temperature                                                                                                              |
| <b>Solubility overview</b>  | Soluble in water (50mM) or DMSO (100mM)                                                                                       |
| <b>Important</b>            | This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use. |

#### Chemical Data

|                           |                                                                                     |
|---------------------------|-------------------------------------------------------------------------------------|
| <b>Chemical name</b>      | 4-Amino-1- $\beta$ -D-ribofuranosyl-1,3,5-triazin-2(1 <i>H</i> )-one                |
| <b>Molecular Weight</b>   | 244.2                                                                               |
| <b>Chemical structure</b> |  |
| <b>Molecular Formula</b>  | C <sub>8</sub> H <sub>12</sub> N <sub>4</sub> O <sub>5</sub>                        |
| <b>CAS Number</b>         | 320-67-2                                                                            |
| <b>PubChem identifier</b> | 9444                                                                                |
| <b>SMILES</b>             | <chem>O[C@@H]1[C@H](O)[C@@H](CO)O[C@H]1N2C(N=C(N)N=C2)=O</chem>                     |
| <b>InChiKey</b>           | NMUSYJAQQFHJEW-KVTDHHQDSA-N                                                         |

#### References

**5-Azacytidine suppresses the proliferation of pancreatic cancer cells by inhibiting the Wnt/ $\beta$ -catenin signaling pathway.**

Zhang H *et al* (2014) Genet Mol Res 13(3)

PubMedID 25061731

5-azacytidine reduces methylation, promotes differentiation and induces tumor regression in a patient-derived IDH1 mutant glioma xenograft.

Borodovsky A *et al* (2013) Oncotarget 4(10)

PubMedID 24077805

5-Azacytidine can induce lethal mutagenesis in human immunodeficiency virus type 1.

Dapp MJ *et al* (2009) J Virol 83(22)

PubMedID 19726509

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