Decitabine

DNA Methyltransferase inhibitor

Decitabine works by incorporating into DNA during replication and inhibiting DNA methyltransferase, leading to DNA hypomethylation and the reactivation of silenced genes. This mechanism makes it effective in targeting rapidly dividing cancer cells, which are more susceptible to its action.

Key features and applications include:

- **Epigenetic Research:** Decitabine is widely used to study DNA methylation and its role in gene expression. It helps in understanding the mechanisms of gene silencing and activation.
- **Cancer Research:** It is used to investigate the effects of DNA hypomethylation on tumor suppressor genes and oncogenes, providing insights into cancer development and potential treatments.
- **Stem Cell Research:** Decitabine is employed to study the differentiation and reprogramming of stem cells, particularly in reversing the differentiation of embryonic stem cells.

Relevant disease states include:

- **Myelodysplastic Syndromes (MDS):** Decitabine is approved for the treatment of MDS, a group of hematopoietic disorders characterized by ineffective blood cell production.
- **Acute Myeloid Leukemia (AML):** It is also used in the treatment of AML, particularly in older patients who are not candidates for intensive chemotherapy.
- **Chronic Myelomonocytic Leukemia (CMML):** Decitabine is indicated for CMML, a type of cancer that starts in blood-forming cells of the bone marrow and invades the blood.

Ordering Information

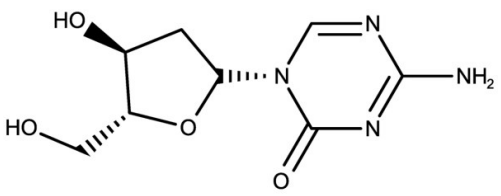
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ENZ-CHM336-0050	50mg

Manuals, SDS & CofA

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- GMP format available


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Handling & Storage

Use/Stability	As indicated on product label or CoA when stored as recommended. Solutions in DMSO or water may be stored at -20°C for up to 3 months.
Handling	Keep container tightly closed in a dry and well-ventilated place.
Short Term Storage	-20°C
Long Term Storage	-20°C
Shipping	Ambient Temperature

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	5-Aza-2′-deoxycytidine, 5-AZA-CdR, NSC 127716
Appearance	White solid.
CAS	2353-33-5
Couple Target	DNA methyltransferase
Couple Type	Inhibitor
Formula	$C_8H_{12}N_4O_4$
Identity	Determined by NMR.
MW	228.21
MeltingPoint	200°C (392°F)
Purity	≥98% (HPLC)
Solubility	Soluble in DMSO (up to 25 mg/mL) or in water (up to 11 mg/mL).

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