

# Guadecitabine sodium

Catalog No: **tcsc0003821**



## Available Sizes

**Size:** 5mg

**Size:** 10mg



## Specifications

**CAS No:**

929904-85-8

**Formula:**

$C_{18}H_{23}N_9NaO_{10}P$

**Pathway:**

Epigenetics

**Target:**

DNA Methyltransferase

**Purity / Grade:**

>98%

**Solubility:**

H<sub>2</sub>O

**Alternative Names:**

S-110 sodium □ S-110 sodium

**Observed Molecular Weight:**

579.39

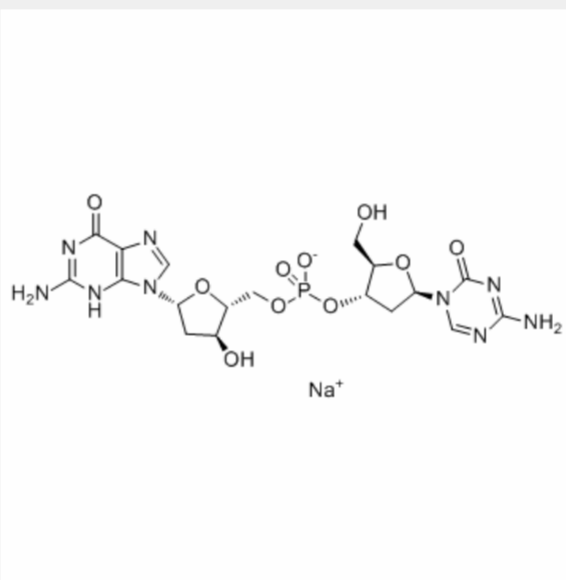
## Product Description

S-110 is a dinucleotide consisting of 5-Aza-CdR followed by a deoxyguanosine which shows to be an effective **DNA methylation inhibitor**.

IC50 & Target: Target: DNA methylation inhibitor<sup>[1]</sup>

**In Vitro:** After HCT116 colorectal carcinoma cells are treated for 6 days, a dose-dependent increase in p16 expression is observed with S-110. In addition, T24 and HCT116 cells treated with S-110 or 5-aza-CdR for 3 days show a dose-dependent increase in the level of p16 protein, showing the competence of S-110 to inhibit DNA methylation and induce p16 at both mRNA and protein levels as well as 5-aza-CdR. Thus, S-110 is able to inhibit DNA methylation at 5'-region and induce the expression of the p16 gene in T24 and HCT116 cells at concentrations comparable to 5-aza-CdR, and the induction of p16 expression by both agents correlates with the demethylation at the 5'-end region of the gene in both cell lines. S-110 is slightly less toxic than 5-aza-CdR at the doses tested up to 1  $\mu$ M concentration but displaying similar toxicity at 10  $\mu$ M concentration<sup>[1]</sup>.

**In Vivo:** S-110 at 10mg/kg is an effective dose at reducing DNA methylation and retarding tumor growth, and caused roughly the same level of toxicity as 5-Aza-CdR. S-110 is effective *in vivo* at reactivating the expression of the p16 gene, which is heavily methylated in the parent EJ6 cells. S-110 is effective in reducing the level of DNA methylation *in vivo* at the p16 promoter region. S-110 is better tolerated than 5-Aza-CdR *in vivo*, suggesting that it can be an attractive alternative for potential clinical use<sup>[2]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!