Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

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:
H2O

Alternative Names:
SGI-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**.

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IC50 & Target: Target: DNA methylation inhibitor[1]

In Vitro: After HCT116 colorectal carcinoma cells are treated for 6 days, a dose-dependent increase in p16expression 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 μM concentration but displaying similar toxicity at 10 μM concentration[1].

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[2].