

Dp44mT

Catalog No: tcsc0014820



Available Sizes

Size: 10mg

Size: 25mg

Size: 50mg

Size: 100mg



Specifications

CAS No:

152095-12-0

Formula:

$C_{14}H_{15}N_5S$

Pathway:

Others

Target:

Others

Purity / Grade:

>98%

Solubility:

10 mM in DMSO

Observed Molecular Weight:

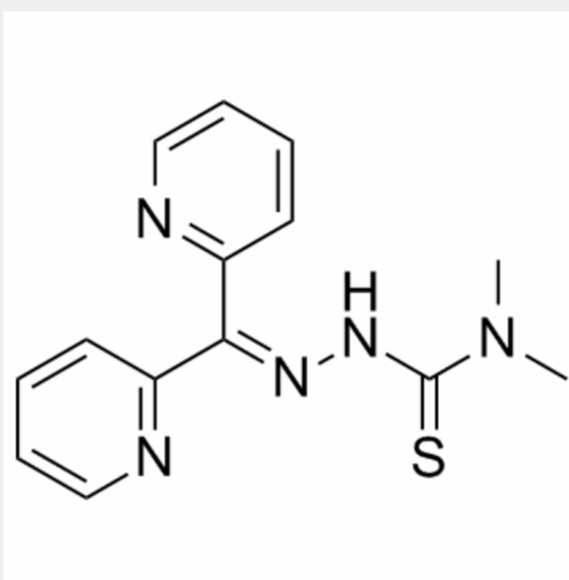
285.37

Product Description

Dp44mT is an **iron chelator** with selective anticancer activity.

IC50 & Target: Target: Iron chelator^[1]

In Vitro: Dp44mT is cytotoxic to breast cancer cells, at least in part, due to selective inhibition of top2 α . Dp44mT alone induced selective cell killing in the breast cancer cell line MDA-MB-231 when compared with healthy mammary epithelial cells (MCF-12A). It induces G1 cell cycle arrest and reduces cancer cell clonogenic growth at nanomolar concentrations. Dp44mT, but not the iron chelator desferal, induces DNA double-strand breaks quantified as S139 phosphorylated histone foci (γ -H2AX) and Comet tails induced in MDA-MB-231 cells. Doxorubicin-induced cytotoxicity and DNA damage are both enhanced significantly in the presence of low concentrations of Dp44mT. The chelator caused selective poisoning of DNA topoisomerase II α (top2 α) as measured by an *in vitro* DNA cleavage assay and cellular topoisomerase-DNA complex formation^[1]. Dp44mT targets lysosome integrity through copper binding. Copper binding is essential for the potent antitumor activity of Dp44mT, as incubation with nontoxic copper chelators markedly attenuated its cytotoxicity^[2].



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