

Voreloxin

Catalog No: tcsc0790



Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg



Specifications

CAS No:

175414-77-4

Formula:

$C_{18}H_{19}N_5O_4S$

Pathway:

Cell Cycle/DNA Damage

Target:

Topoisomerase

Purity / Grade:

>98%

Solubility:

10 mM in DMSO

Alternative Names:

SNS-595; Vosaroxin; AG 7352

Observed Molecular Weight:

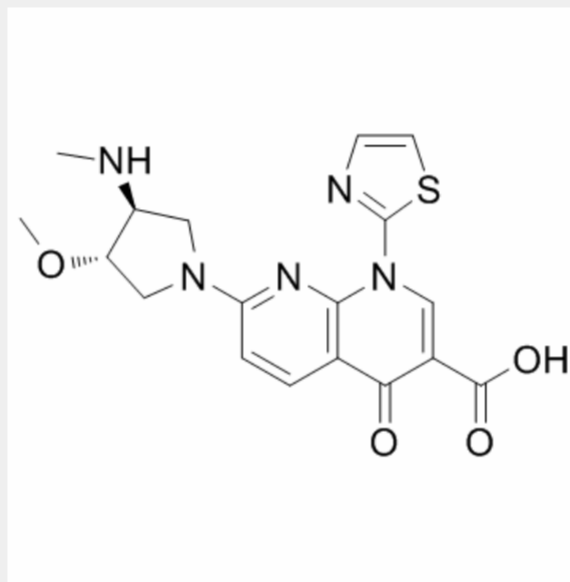
401.44

Product Description

Voreloxin is a first-in-class **topoisomerase II** inhibitor that intercalates DNA and induces site-selective DNA DSB, G2 arrest, and apoptosis.

In Vitro: Voreloxin is a first-in-class topoisomerase II poison and inhibitor that intercalates DNA and induces site-selective DNA DSB, G2 arrest, and apoptosis. Voreloxin (0.1-20 μM) inhibits topoisomerase II activity and induces site-selective DNA DSB in CCRF-CEM cells. Voreloxin (0.11, 0.33, 1, 3 μM) induces G2 arrest partially through topoisomerase II in A549 lung cancer cell line. Voreloxin cytotoxic activity requires DNA intercalation. However, Voreloxin (1-9 μM) does not generate significant levels of ROS^[1]. Voreloxin has potent cytotoxic activity in AML cell lines MV4-11 and HL-60, with IC_{50} s of 95 ± 8 nM and 884 ± 114 nM, respectively. Voreloxin in combination with cytarabine shows additive or synergistic activity in acute leukemia cell lines^[2]. Voreloxin is active on the primary acute myeloid leukemia (AML) with a mean LD_{50} of 2.3 μM . The LD_{50} for voreloxin in myeloid cell lines NB4 and HL-60 is $0.59 \mu\text{M} \pm 0.25 \mu\text{M}$. Voreloxin causes accumulation of cells in the S and G2 phases of the cell cycle and acts on topoisomerase II^[3].

In Vivo: Voreloxin (20 mg/kg, i.v.) alone results in 80% reduction in bone marrow cellularity of CD-1 mice by administration one dose every 4 days repeated twice (q4d $\times 2$). voreloxin at 10 mg/kg in combination with cytarabine causes ablation of the marrow, dilation of sinusoids, and infiltration of adipocytes in mice. Voreloxin (20 mg/kg, i.v.) combined with cytarabine causes a reversible decrease in myeloid and lymphoid cells in bone marrow and peripheral blood CD-1 mice. voreloxin (10 mg/kg, q4d $\times 2$) and cytarabine in combination causes reversible neutropenia with a more modest impact on platelets CD-1 mice^[2].



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