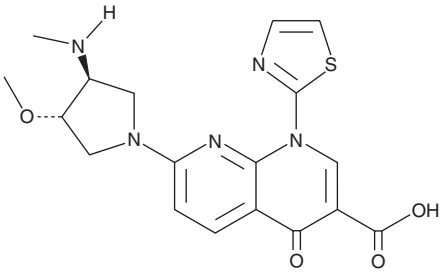
PRODUCT INFORMATION

Vosaroxin

Item No. 30614

CAS Registry No.:	175414-77-4
Formal Name:	1,4-dihydro-7-[(3S,4S)-3-methoxy-4-(methylamino)-1-pyrrolidinyl]-4-oxo-1-(2-thiazolyl)-1,8-naphthyridine-3-carboxylic acid
Synonyms:	SNS-595, Voreloxin
MF:	$C_{18}H_{19}N_5O_4S$
FW:	401.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 273, 345 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Vosaroxin is supplied as a crystalline solid. A stock solution may be made by dissolving the vosaroxin in the solvent of choice, which should be purged with an inert gas. Vosaroxin is slightly soluble in methanol and DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of vosaroxin can be prepared by directly dissolving the crystalline solid in aqueous buffers. Vosaroxin is slightly soluble in PBS, pH 7.2. We do not recommend storing the aqueous solution for more than one day.

Description

Vosaroxin is an inhibitor of topoisomerase II.[1] It induces relaxation of supercoiled DNA with an IC_{50} value of 3.2 µg/ml in a cell-free assay. It induces DNA double-strand breaks in CCRF-CEM cells and cell cycle arrest at the G_2 phase in A549 cells in a concentration-dependent manner.[2] Vosaroxin inhibits proliferation in a panel of 15 cancer cell lines, including cancer cells resistant to doxorubicin (Item No. 15007), etoposide (Item No. 12092), or cisplatin (Item No. 13119), with IC_{50} values ranging from 0.04 to 1.15 µM.[3] It inhibits tumor growth in multidrug-resistant SBC-3/ETP or PC-14/CDDP mouse xenograft models when administered at a dose of 20 mg/kg.

References

1. Tsuzuki, Y., Tomita, K., Shibamori, K.-i., *et al.* Synthesis and structure-activity relationships of novel 7-substituted 1,4-dihydro-4-oxo-1-(2-thiazolyl)-1,8-naphthyridine-3-carboxylic acids as antitumor agents. Part 2. *J. Med. Chem.* **47(8)**, 2079-2109 (2004).
2. Hawtin, R.E., Stockett, D.E., Byl, J.A.W., *et al.* Voreloxin is an anticancer quinolone derivative that intercalates DNA and poisons topoisomerase II. *PLoS One.* **5(4)**, e10186 (2010).
3. Hoch, U., Lynch, J., Sato, Y., *et al.* Voreloxin, formerly SNS-595, has potent activity against a broad panel of cancer cell lines and in vivo tumor models. *Cancer Chemother. Pharmacol.* **64(1)**, 53-65 (2009).

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