
Product Data Sheet

Product Name: Amrubicin

Cat. No.: GC15644

Chemical Properties

Cas. No. 110267-81-7

Chemical Name (7S,9S)-9-acetyl-9-amino-7-[(2S,4S,5R)-4,5-dihydroxyoxan-2-yl]oxy-6,11-dihydroxy-8,10-dihydro-7H-tetracene-5,12-dione

SMILES CC(=O)C1(CC(C2=C(C3=C(C(=C2C1)O)C(=O)C4=CC=CC=C4C3=O)O)OC5CC(C(CO5)O)O)NFormula C₂₅H₂₅NO₉

M.Wt 483.47

Solubility ≥ 16.45mg/mL in DMSO

Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure **Protocol****Cell experiment: [1]**

Cell lines CCRF-CEM cells

Preparation method The solubility of this compound in DMSO is >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Reaction Conditions IC 50: 3.3 μM, 1 hour

Caution: Product has not been fully validated for medical applications. For research use only.

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Address: 10292 Central Ave. #205, Montclair, CA, USA

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Applications	Amrubicin induced DNA-protein complex formation in cultured CCRF-CEM cells in a dose-dependent manner. The IC50 value of amrubicin required to inhibit the growth of CCRF-CEM cells was 3.3 μ M. Accordingly, under conditions where cell growth was inhibited by amrubicin, considerable amounts of DNA-protein complexes were formed.
Animal experiment: [2]	
Animal models	BALB/c nu/nu mice bearing Lu-24 or Lu-134 cells
Dosage form	Intravenous injection, 25 mg/kg
Applications	Amrubicin showed significant antitumor activities against both SCLC tumors tested, Lu-24 and Lu-134, with T/C-values at day 14 of 17% and 9%, respectively.
Other notes	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

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References:

[1] Hanada M, Mizuno S, Fukushima A, et al. A New Antitumor Agent Amrubicin Induces Cell Growth Inhibition by Stabilizing Topoisomerase II-DNA Complex. *Cancer Science*, 1998, 89(11): 1229-1238.

[2] Hanada M, Noguchi T, Yamaoka T. Amrubicin, a novel 9-aminoanthracycline, enhances the antitumor activity of chemotherapeutic agents against human cancer cells in vitro and in vivo. *Cancer science*, 2007, 98(3): 447-454.

Background

A synthetic anthracycline antibiotic. It inhibits DNA topoisomerase II. Antineoplastic.

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