
Product Data Sheet

Product Name: Amrubicin hydrochloride

Cat. No.: GC35329

Chemical Properties

Cas. No. 110311-30-3

SMILES CC([C@@](C1)(N)C[C@H](O[C@@H]2OC[C@@H](O)[C@@H](O)C2)C(C1=C3O)=C(O)C4=C3C(C5=CC=CC=C5C4=O)=O)=O.Cl

Formula	C ₂₅ H ₂₆ ClNO ₉	M.Wt	519.93
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Solubility	Soluble in DMSO	Storage	Store at -20°C
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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 **Background**

Amrubicin (hydrochloride) (SM-5887 (hydrochloride)) is a DNA topoisomerase II inhibitor, used for the research of cancer. Topoisomerase II

Amrubicin (hydrochloride) (SM-5887 (hydrochloride)) is a DNA topoisomerase II inhibitor. Amrubicin (SM-5887) (2.5 µg/mL) shows radio-enhancement effects on human lung adenocarcinoma A549 cells[1]. Amrubicin (SM-5887) supresses the LX-1, A549, A431, and BT-474 cell lines, with IC50s of 1.1 ± 0.2, 2.4 ± 0.8, 0.61 ± 0.10 and 3.0 ± 0.3 µg/mL, respectively[2]. Amrubicin (SM-5887) inhibits the cell cycle profile of U937 cells with an IC50 of 5.6 µM. Amrubicin (20 µM) also induces apoptosis in U937 cells, activates caspase-3/7 and reduces the mitochondrial membrane potential (δψm)[3].

Amrubicin (SM-5887) (25 mg/kg, i.v.) exhibits significant antitumor activities against both SCLC tumors, Lu-24 and Lu-134, with T/C-values (comparing the mean tumor growth rates of the treated group with those of the control group for each day that the tumors are measured) at day 14 of 17% and 9%, respectively. Amrubicin (SM-5887) (25 mg/kg, i.v.) in combination with cisplatin and irinotecan significantly inhibits the growth

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

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

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of tumors compared to amrubicin alone in mice bearing LX-1 tumor cells. Amrubicin (SM-5887) alone or combined with tegafur and uracil also suppresses tumor growth in human cancer xenograft models[2].

[1]. Hayashi S, et al. Enhancement of radiosensitivity by topoisomerase II inhibitor, amrubicin and amrubicinol, in human lung adenocarcinoma A549 cells and kinetics of apoptosis and necrosis induction. *Int J Mol Med*. 2006 Nov;18(5):909-15. [2]. Hanada M, et al. Amrubicin, a novel 9-aminoanthracycline, enhances the antitumor activity of chemotherapeutic agents against human cancer cells in vitro and in vivo. *Cancer Sci*. 2007 Mar;98(3):447-54. [3]. Hanada M, et al. Amrubicin induces apoptosis in human tumor cells mediated by the activation of caspase-3/7 preceding a loss of mitochondrial membrane potential. *Cancer Sci*. 2006 Dec;97(12):1396-403. Epub 2006 Sep 21.

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