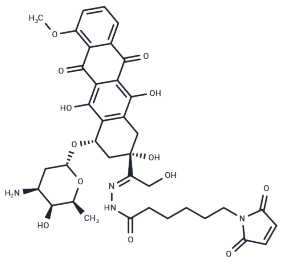
Data Sheet (Cat.No.T11090L)

TargetMol

Aldoxorubicin

Chemical Properties



CAS No. : 1361644-26-9

Formula: C37H42N4O13

Molecular Weight: 750.75

Storage: Powder: -20°C for 3 years
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Aldoxorubicin has effective antitumor activities in various cancer cell lines and in murine tumor models. Aldoxorubicin is an albumin-binding prodrug of Doxorubicin (DNA topoisomerase II inhibitors).
Targets(IC50)	ADC Cytotoxin,Topoisomerase
In vitro	Aldoxorubicin (0.27 to 2.16 μM) suppresses blood vessel formation. Aldoxorubicin (0.27 to 2.16 μM) also reduces multiple myeloma cell growth in a pH-dependent fashion.
In vivo	Aldoxorubicin displays a good safety profile at doses up to 260 mg/mL doxorubicin equivalents and is able to cause tumor regressions in breast cancer, small cell lung cancer, and sarcoma in phase I study[2]. In a murine renal cell carcinoma model and in breast carcinoma xenograft models, Aldoxorubicin also shows superior activity over doxorubicin [3]. On days 28, Aldoxorubicin (10.8 mg/kg, i.v.) displays obviously smaller tumor volumes and IgG levels, and is well tolerated with 90% of mice surviving until the termination of the study in the mice bearing the LAGκ-1A tumor[1].

Solubility Information

Solubility	DMSO: 75 mg/mL (99.9 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 3.3 mg/mL (4.4 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.332 mL	6.660 mL	13.320 mL
5 mM	0.2664 mL	1.332 mL	2.664 mL
10 mM	0.1332 mL	0.666 mL	1.332 mL
50 mM	0.0266 mL	0.1332 mL	0.2664 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Eric Sanchez, et al. Anti-Myeloma Effects of the Novel Anthracycline Derivative INNO-206. Clin Cancer Res.2012 18; 3856.

Wang X, Ji Y, Jin D, et al. Natural Polysaccharide β-Glucan Protects against Doxorubicin-Induced Cardiotoxicity by Suppressing Oxidative Stress. Nutrients. 2022, 14(4): 906.

Kratz, F. INNO-206 (DOXO-EMCH), an Albumin-Binding Prodrug of Doxorubicin Under Development for Phase II Studies. Current Bioactive Compounds, 2011, 7(1): 33-38(6)

Graeser R, et al. INNO-206, the (6-maleimidocaproyl hydrazone derivative of doxorubicin), shows superior antitumor efficacy compared to doxorubicin in different tumor xenograft models and in an orthotopic pancreas carcinoma model. Invest New Drugs. 2010 F

Walker L, et al. Cell penetrating peptides fused to a thermally targeted biopolymer drug carrier improve the delivery and antitumor efficacy of an acid-sensitive doxorubicin derivative. Int J Pharm. 2012 Oct 15;436(1-2):825-32.