Product Data Sheet

Product Name: ART5537
Cat. No.: GC81432

Chemical Properties

Cas. No.			
Formula	$C_{23}H_{18}ClN_5O_3$	M.Wt	447.87
Solubility	DMSO: 50 mg/mL (111.64 mM; Need ultrasonic)	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.		

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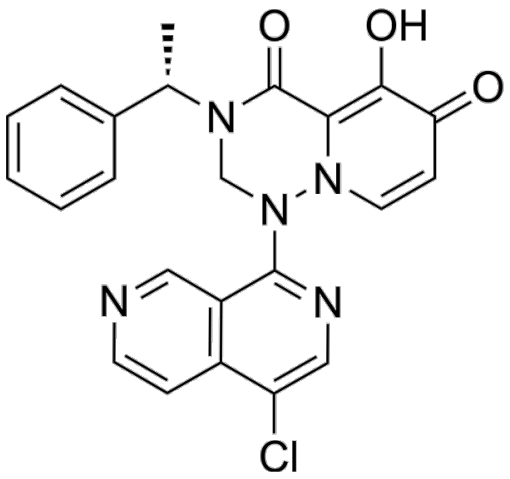
Structure



Background

ART5537 is a selective EXO1 inhibitor with a IC_{50} of 3.4 nM and a K d of 6.8 nM. ART5537 exerts cellular homologous recombination (HR) inhibition with EC 50 of 7.2 nM in HAP1 parental cells. ART5537 shows >200-fold selectivity over a panel of the wider nuclease superfamily. ART5537 exerts biological effects that are exclusively driven by EXO1 inhibition. ART5537 demonstrates sensitization to ionizing radiation and synergy with Olaparib. ART5537 can be used for research in breast cancer and colorectal adenocarcinoma [1].

In Vivo, ART5537 demonstrates unfavorable pharmacokinetic properties in mice, specifically high systemic clearance and very low oral bioavailability (less than 5%)[1].

In Vitro, ART5537 (0.0001-10 μM) displays unambiguous dose-dependent cellular target

engagement with an EC50 = 55 nM[1]. ART5537 (0.001-10 μM) has no activation HAP1 EXO1 KO cells, shows no further effect over KO of EXO1 (~ 50% reduction) and induces a dose-dependent retention of GPF2-EXO1 on chromatin in a U-2 OS Flp-In line [1]. ART5537 (7 days) is not a broadly cytotoxic and has a mild EXO1-dependent sensitivity in MDA-MB-436 (EC50 = 4.0 nM), HCC 1937 (EC50 = 5.3 nM), SUM 149PT (EC50 = 5.0 nM) and HCC38 (EC50 = 8.3 nM) cells[1]. ART5537 (5 days) exhibits no ubiquitous cytotoxicity in HCT116 cells following cotreatment with Olaparib [1]. ART5537 (7 days) combined with Olaparib exerts a strong synergistic effect in radiation-treated wild-type HCT116 cells, but no such effect is observed in the two radiation-treated EXO1 knockout clones[1]. ART5537 (0.01-100 μM, 6 days) effectively inhibits EXO1, and when combined with Olaparib in radiation-treated HCT116 cells, it significantly enhances the cancer cell-killing effect and greatly increases the activity potency[1]. ART5537 inhibits EXO1 in HCT116 cells and results in a > 40-fold sensitization, has suitable physicochemical properties for use as a cell probe with high thermodynamic solubility and good passive permeability and is unstable in human and mouse liver microsomes[1].

References:

[1]. Mann SE, et al. Discovery of ART5537: A Potent and Selective Small-Molecule Probe for EXO1. J Med Chem. 2025 Dec 25;68(24):26432-26447.