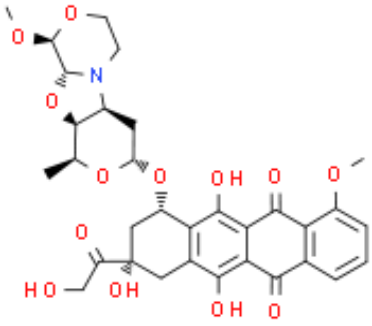
Product Data Sheet

Cas No.:	202350-68-3	Cat. No:	PL12389
Product Name:	PNU-159682		
Product synonym:	PNU-159682		
Chemical name:	PNU-159682		
MF:	C32H35NO13	FW:	641.6192
Purity:	≥98%	Batch No.:	-
Storage:			
Structural formula:			
λmax：	-	Formulation：	-
Solubility :			
SMILES :	COC1=C(C(C(C(O)=C([C@@H](O[C@H]2C[C@H]3[C@H](O[C@H]4N3CCO[C@@H]4OC)[C@H](C)O2)C[C@@](C(CO)=O)(O)C5)C5=C6O)=C6C7=O)=O)C7=CC=C1		
InChI Code:	-		
InChI Key:			
WARNING This product is not for human or veterinary use.			

Product Description

PNU-159682 是蒽环类新霉素的代谢产物，是一种 DNA 拓扑异构酶 II (Topo II) 抑制剂，具有出色的细胞毒性。在ADC 合成中，PNU-159682 是一种比阿霉素更有效和耐受性更高的 ADC 细胞毒素 (ADC cytotoxin)。PNU-159682 可用于 EDV 纳米细胞技术，克服耐药性。

生物活性	PNU-159682, a metabolite of the anthracycline Nemorubicin, is a highly potent DNA topoisomerase II inhibitor with excellent cytotoxicity. PNU-159682 acts as a more potent and tolerated ADC cytotoxin than Doxorubicin for ADC synthesis. PNU-159682 can be used in EDV-nanocell technology to overcome drug resistance.
IC50 & Target[1][2]	Daunorubicins/Doxorubicins Topoisomerase I

体外研究(In Vitro)	PNU-159682 (0-500 nM; exposed to the compounds for 1 hour and then cultured in compound-free medium for 72 hours) has cytotoxic effects on human tumor cell lines in a sulforhodamine B assay. The IC70 values are 0.577 nM, 0.39 nM, 0.128 nM, and 0.081 nM, 0.086 nM and 0.075 nM for HT-29, A2780, DU145, EM-2, Jurkat and CEM cells, respectively. It against human tumor cell lines with IC70 in the ranging 68 nM-578 nM and 181 nM-1717 nM towards MMDX and doxorubicin, respectively. PNU-159682 is more potent than MMAE on NHL cell lines. In a cell viability assay, PNU-159682 is against BJAB.Luc, Granta-519, SuDHL4.Luc, and WSU-DLCL2 with IC50 values of 0.10 nM, 0.020 nM, 0.055 nM, and 0.1 nM, respectively. While MMAE is against BJAB.Luc, Granta-519, SuDHL4.Luc, and WSU-DLCL2 with IC50 values of 0.54 nM, 0.25 nM, 1.19 nM and 0.25 nM, respect
体内研究(In Vivo)	PNU-159682 (single-dose; i.v.15 μg/kg) is a maximum tolerated dose in murine L1210 leukemia model. PNU-159682 shows an improved antitumor activity in vivo. The antitumor effect of PNU-159682 (increase in life span=29%) is comparable to that afforded by 90 μg/kg MMDX (increase in life=36%). PNU-159682 (i.v. 4 μg/kg; q7dx3; 40 days) has a therapeutic response in MX-1 human mammary carcinoma mice. What's more, from day 39, four out of seven mice receiving PNU-159682 exhibits complete tumor regression. PNU-159682 is more cytotoxic than doxorubicin and can be used to develop a new class of ADCs. PNU159682 to anti-CD22 antibody (anti-CD22-NMS249) exhibits strong anti-tumor effects in vivo. ADC dose (anti-CD22-NMS249; 50 μg/m2 conjugated PNU-159682) is well tolerated in mice and results in less than 10% weight loss.
包装储存	4°C, stored under nitrogen In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)
溶解度数据	In Vitro: DMSO : 100 mg/mL (155.86 mM; Need ultrasonic)配制储备液