

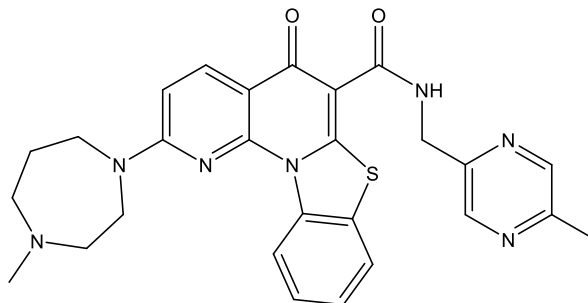
Catalog # 10-2998

CX-5461

CAS# 1138549-36-6

2-(Hexahydro-4-methyl-1H-1,4-diazepin-1-yl)-N-[(5-methyl-2-pyrazinyl)methyl]-5-oxo-5H-benzothiazolo
[3,2-a][1,8]naphthyridine-6-carboxamide

Lot # R110931



CX-5461 is a first-in-class selective RNA polymerase I inhibitor, suppressing Pol I transcription in MV 4;11 myelomonocytic leukemia cells and SR immunoblastic lymphoma cells with EC_{50} values of 95 and 135 nM respectively and demonstrating 200-fold selectivity over Pol II.^{1,2} Activates the DNA damage response.³ It induces a rapid accumulation of cytosolic DNA which results in upregulation of STING.⁴ Acts as a potent immunosuppressant inhibiting T cell-mediated alloimmunity and representing a novel class of immunosuppressant.⁵

- 1) Drygin *et al.* (2011), *Targeting RNA polymerase I with an oral small molecule CX-5461 inhibits ribosomal RNA synthesis and solid tumor growth*; *Cancer Res.*, **71** 1418
- 2) Haddach *et al.* (2012), *Discovery of CX-5461, the first direct and selective inhibitor of RNA polymerase I, for cancer therapeutics*; *ACS Med. Chem. Lett.*, **3** 602
- 3) Sanij *et al.* (2020), *CX-5461 activates the DNA damage response and demonstrates therapeutic efficacy in high-grade serous ovarian cancer*; *Nat. Commun.*, **11** 2641
- 4) Cornelison *et al.* (2021), *CX-5461 Treatment Leads to Cytosolic DNA-Mediated STING Activation in Ovarian Cancer*; *Cancers (Basel)*, **13** 5056
- 5) Pan *et al.* (2022), *CX-5461 is a potent immunosuppressant which inhibits T cell-mediated alloimmunity via p53-DUSP5*; *Pharmacol. Res.*, **177** 106120

PHYSICAL DATA

Molecular Weight:	513.62
Molecular Formula:	C ₂₇ H ₂₇ N ₇ O ₂ S
Purity:	>98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (10 mg/ml with warming)
Physical Description:	Off-white solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

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