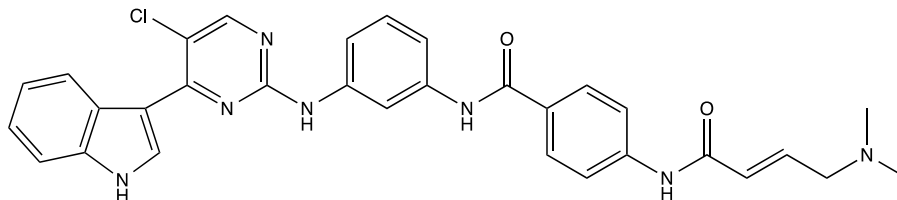


**Catalog # 10-4120**

**THZ1**

CAS# 1604810-83-4

(E)-N-(3-((5-chloro-4-(1H-indol-3-yl)pyrimidin-2-yl)amino)phenyl)-4-(4-(dimethylamino)but-2-enamido)benzamide  
Lot # FBS1063



THZ1 is an irreversible, covalent inhibitor (dual ATP-site and allosteric covalent binding) of CDK7 ( $IC_{50} = 15.6nM @ 20min$  and  $3.2nM @ 180 min$ ).<sup>1</sup> It displayed broad based antiproliferative activity with  $IC_{50}$ 's of less than 200nM against 53% of the 1000 cancer cell lines it was tested against. THZ1 disrupts transcription of several proteins including RUNX1, TAL1, and GATA3. It suppresses oncogenic transcription of MYCN-driven cancers.<sup>2</sup> THZ1 decreases STAT3 chromatin binding and expression of target genes such as MYC, PIM1, and others in peripheral T-Cell lymphoma cells with the Y640F STAT3 mutation.<sup>3</sup> Addition of THZ1 to targeted cancer therapy increases cell death and hinders the development of drug-resistant cell populations in cellular and *in vitro* cancer models.<sup>4</sup>

- 1) Kwiatkowski *et al.* (2014), *Targeting transcription regulation in cancer with a covalent CDK7 inhibitor*; Nature, **511** 616
- 2) Chipumuro *et al.* (2014), *CDK7 inhibition suppresses super-enhancer-linked oncogenic transcription of MYCN-driven cancers*; Cell, **159** 1126
- 3) Cayrol *et al.* (2017), *THZ1 targeting CDK7 suppresses STAT transcriptional activity and sensitizes T-cell lymphomas to BCL2 inhibitors*; Nature Commun., **8** 14290
- 4) Rusan *et al.* (2018), *Suppression of Adaptive Responses to Targeted Cancer Therapy by Transcriptional Repression*; Cancer Discov., **8** 59

**PHYSICAL DATA**

Molecular Weight:	566.05
Molecular Formula:	$C_{31}H_{28}ClN_7O_2$
Purity:	>97% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (>25 mg/ml)
Physical Description:	Tan solid
Storage and Stability:	Store as supplied at -20°C for up to 1 year from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.