

Product Datasheet

THZ531

Catalog No. **BP-02326** · CAS **1702809-17-3** · Form **free base** · Physical state **other** · Color **White to light yellow** · Version **1.0**
· Revision **2026-09-10**

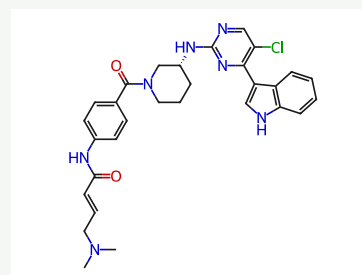
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Target CDK	Research area Cancer
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Molecular formula **C₃₀H₃₂ClN₇O₂**

Molecular weight **558.0740**

STRUCTURE



DESCRIPTION

THZ531 is a selective and covalent inhibitor of both CDK12 and CDK13 with IC₅₀s of 158 nM and 69 nM, respectively.

BIOLOGICAL ACTIVITY

In Vitro

The results from Kinase assays demonstrate that THZ531 potently inhibits CDK12 and CDK13 with IC₅₀s of 158 nM and 69 nM, respectively; whereas inhibition of CDK7 and CDK9 is more than 50-fold weaker with IC₅₀s of 8.5 and 10.5 μM, respectively. THZ531 treatment leads to a dramatic and irreversible decrease in Jurkat cell proliferation with an IC₅₀ of 50 nM. FACS cell cycle analysis following treatment with escalating doses of THZ531 displays a dose and time-dependent increase in the number of cells exhibiting sub-G1 content. At 50 nM THZ531, no increase in the percentage of apoptotic cells is observed over DMSO control for the time course of the experiment. Higher doses of THZ531 leads to pronounced Annexin V signal with 30 to 40% annexin V-positively stained cells by 72 hrs. A dramatic reduction in elongating Pol II following THZ531 treatment is also observed

SOLUBILITY

Soluble in DMSO

REFERENCES

[1]. Zhang T, et al. Covalent targeting of remote cysteine residues to develop CDK12 and CDK13 inhibitors. Nat Chem Biol. 2016 Oct;12(10):876-84.

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