Product Datasheet

Chk1-IN-6

Catalog No. **BP-02014** · CAS **2428423-77-0** · Form **free base** · Physical state **solid** · Color **White to off-white** · Version **1.0** · Revision **2026-09-11**

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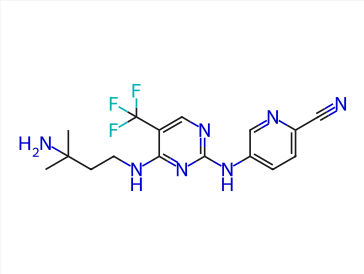
Target	Research area
Checkpoint Kinase (Chk)	**Cancer**

Molecular formula	$C_{16}H_{18}F_3N_7$
Molecular weight	**365.3562**

STRUCTURE



DESCRIPTION

Chk1-IN-6 is a selective and orally active Chk1 inhibitor with an IC50 of 16.1 nM. Chk1-IN-6 shows antiproliferative activity of MV-4-11 cells. Chk1-IN-6 exerts effective response in the MV-4-11 xenograft mouse model. Chk1-IN-6 exhibits synergistic anticancer effect with Gemcitabine. Chk1-IN-6 can be used in the research of cancers such as acute myeloid leukemia and colorectal adenocarcinoma.

BIOLOGICAL ACTIVITY

In Vitro Chk1-IN-6 (Compound 6c) shows antiproliferative activity of MV-4-11 and Z138 cells with IC50 values of 0.14 and 3.28 μM[1]. Chk1-IN-6 (0-5 nM, 72 h) combined with Gemcitabine shows a synergistic effect on HT-29, A549, and RPMI-8226[1]. Chk1-IN-6 (0-800 nM, 2 h) inhibits the phosphorylated S296 CHK1 (pS296 CHK1) and induces the phosphorylated S345 CHK1 (pS345 CHK1) in MV-4-11[1]. In Vivo k1-IN-6 (Compound 6c) (5-30 mg/kg, p.o., once daily for 21 days) significantly inhibits tumor growth in vivo in a dose-dependent manner in the MV-4-11 xenograft mouse model[1]. Chk1-IN-6 (5-30 mg/kg, p.o., continuously for 5 days/week for 22 days) shows synergistic anticancer effect of with Gemcitabine in the HT-29 xenograft mouse model[1].

SOLUBILITY

Soluble in DMSO : 25 mg/mL

REFERENCES

[1]. Jin T, et al. Discovery and Development of a Potent, Selective, and Orally Bioavailable CHK1 Inhibitor Candidate: 5-((4-((3-Amino-3-methylbutyl)amino)-5-(trifluoromethyl)pyrimidin-2-yl)amino)picolinonitrile. J Med Chem. 2021 Oct 28;64(20):15069-15090.