Product Datasheet

MK-5108

Catalog No. **BP-02297** · CAS **1010085-13-8** · Form **free base** · Physical state **solid** · Color **White to off-white** · Version **1.0** · Revision **2026-09-10**

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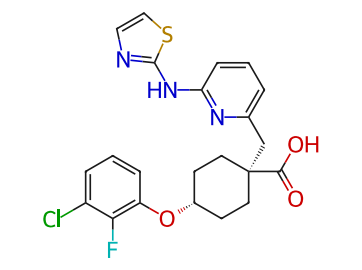
Target	Research area
Aurora Kinase; Autophagy	**Cancer**

Molecular formula	**$C_{22}H_{21}ClFN_3O_3S$**
Molecular weight	**461.9370**

STRUCTURE



DESCRIPTION

MK-5108 is a highly potent and specific inhibitor of Aurora A kinase with an IC50 value of 0.064 nM.

BIOLOGICAL ACTIVITY

In Vitro

MK-5108 inhibits Aurora-A activity with an IC50 value of 0.064 nM in an ATP-competitive manner. It shows robust selectivity against the other family kinases Aurora-B (220-fold) and Aurora-C (190-fold). MK-5108 also exhibits high selectivity for Aurora-A over other protein kinases. MK-5108 inhibits the growth of 14 cell lines with IC50 values between 0.16 and 6.4 μM.

In Vivo

MK-5108 treatments at 15 and 30 mg/kg results in significant tumor growth inhibition in the HCT116 tumor model. MK-5108 is well tolerated at both doses, with minimal reduction in body weight. MK-5108 also exhibits significant antitumor activity in nude rats bearing SW48 tumors. MK-5108 at 15 and 45 mg/kg causes dose-dependent tumor growth inhibition with a %T/C of 35% and 7% at day 10, and 58% and 32% at day 27, respectively. MK-5108 is well tolerated in nude rats, with no body weight reduction and moderate effect on blood cells.

SOLUBILITY

Soluble in DMSO

REFERENCES

[1]. Shimomura T, et al. MK-5108, a highly selective Aurora-A kinase inhibitor, shows antitumor activity alone and in combination with docetaxel. Mol Cancer Ther. 2010 Jan;9(1):157-66.