Product Datasheet

MRTX9768

Catalog No. **BP-02036** · CAS **2629314-68-5** · Form **free base** · Physical state **solid** · Color **White to light brown** · Version **1.0** · Revision **2026-09-11**

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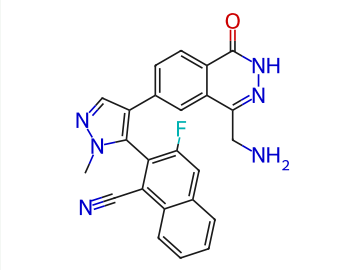
Target	Research area
Histone Methyltransferase	**Cancer**

Molecular formula	**$C_{24}H_{17}FN_6O$**
Molecular weight	**424.4298**

STRUCTURE



DESCRIPTION

MRTX9768 is a potent, selective, orally active, first-in-class PRMT5-MTA complex inhibitor.

BIOLOGICAL ACTIVITY

In Vitro

MRTX9768 inhibits SDMA and cell proliferation in HCT116 MTAP-del cells (SDMA IC50 3 nM; prolif. IC50 11 nM) with marked selectivity over HCT116 MTAP-WT cells (SDMA IC50 544 nM; prolif. IC50 861 nM).

MRTX9768 (0-250 nM) results in LU99 SDMA inhibition maintaining after 3-hr drug treatment followed by 4-day washout (exhibiting tight binding and prolonged PRMT5 MTA occupancy).

In Vivo

In xenograft studies, oral administration of MRTX9768 demonstrates dose-dependent inhibition of SDMA in MTAP-del tumors, with less SDMA modulation observed in bone marrow.

MRTX9768 selectively targets MTAP/CDKN2A-deleted tumors (such as glioblastoma).

MRTX9768 (PO dose 30 mg/kg in CD-1 mouse and beagle dog, 10 mg/kg in cynomolgus monkey) has a favorable ADME profile (>50% bioavailability in mice and dogs, moderate to high clearance, No changes in RBC parameters when administered well above efficacious concentrations (1000 mg/kg)).

MRTX9768 (100 mg/kg, orally, BID, 6/21 days) results in SDMA inhibition maintaining 3 days after dosing is stopped.

SOLUBILITY

Soluble in DMSO 50 mg/mL

REFERENCES

[1]. Christopher R. Smith, et al. Abstract LB003: Fragment based discovery of MRTX9768, a synthetic lethal-based inhibitor designed to bind the PRMT5-MTA complex and selectively target MTAP/CDKN2A-deleted tumors. Cancer

Res 1 July 2021; 81 (13_Supplement): LB003.

[2]. Yingqing Chen, et al. Targeting protein arginine methyltransferase 5 in cancers: Roles, inhibitors and mechanisms. Biomed Pharmacother. 2021 Oct 4;144:112252.

[3]. Matthew A. Marx, et al. Fragment-based discovery of MRTX9768, a synthetic lethal- based inhibitor designed to bind the PRMT5•MTA complex and selectively target MTAPDEL tumors. AACR ANNUAL MEETING 2021:APRIL 10-15, 2021 AND MAY 17-21, 2021.
