For Research Use Only

ML-323

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Catalog Number: CM03807

产品信息

Catalog Number:
CM03807

CAS号:
1572414-83-5

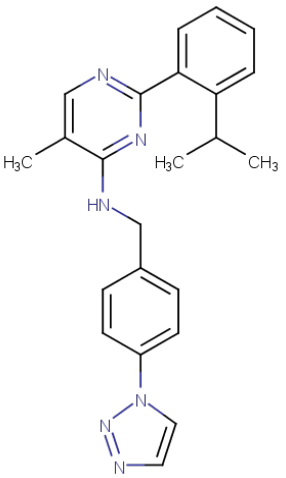
分子式:
$C_{23}H_{24}N_6$

主要靶点:
DUB

主要通路:
DNA损伤和修复|泛素化|细胞周期

分子量:
384.48

溶解度:
Ethanol:38.5 mg/mL (100 mM),DMSO:38.5 mg/mL (100 mM)



靶点活性

USP1-UAF1:76 nM

体内活性

在H596细胞和U2OS骨肉瘤细胞中,ML323以两个主要的DNA损伤应答途径(TLS 和 FA)为靶点,增强顺铂的细胞毒性。通过抑制H596细胞中USP1–UAF1活性,ML323抑制PCNA和ANCD2去泛素化。

细胞实验

For the colony-forming assay, cells are seeded at a density of 300–500 cells per well in six-well plates and grown overnight. Cells are then treated with ML323 alone, cisplatin alone or a combination of cisplatin and ML323 (1:1 or 1:4) at the indicated concentrations. Cells treated with an equal volume of DMSO and saline are used as control. After 48 h of treatment, fresh growth medium is added, and cells are incubated for an additional 5-10 d to allow for colony formation. For UV combination treatment, the cells are treated with ML323 at the indicated concentrations or an equal volume of DMSO. After 48 h, the medium is removed, and cells are irradiated at 254 nm at the indicated dosage. Fresh growth medium is added, and the cells are incubated for an additional 5-10 d to allow for colony formation. The cells without UV irradiation but treated with ML323 or an equal volume of DMSO are used as controls and designated as 100%. After the formation of the colonies, cells are fixed with methanol and stained with 0.5% crystal violet. Colonies consisting of >50 cells are scored. The number of colonies is determined from triplicate plates. The dose-response curves are generated using GraphPad Prism and analyzed by using CalcuSyn to calculate the combination index, which is determined for the fraction of cells affected after the addition of fixed ratios of cisplatin and the USP1-UAF1 inhibitor. (Only for Reference)

描述

ML323 is a reversible and effective USP1-UAF1 inhibitor in a Ub-Rho assay (IC50: 76 nM) and in orthogonal gel-based assays using K63-linked diubiquitin (di-Ub) (IC50: 174 nM 820 nM)and monoubiquitinated PCNA (Ub-PCNA) (IC50: 820 nM) as substrates, respectively.

储存

Powder: -20°C for 3 years | In solvent: -80°C for 2 years