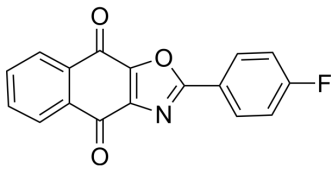
C527

Cat. No.:	HY-12988
CAS No.:	192718-06-2
Molecular Formula:	$C_{17}H_8FNO_3$
Molecular Weight:	293.25
Target:	Deubiquitinase
Pathway:	Cell Cycle/DNA Damage
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro	H_2O : < 0.1 mg/mL (insoluble) DMSO : < 1 mg/mL (ultrasonic;warming;heat to 60°C) (insoluble or slightly soluble)

BIOLOGICAL ACTIVITY

Description	C527 is a is a pan DUB enzyme inhibitor, with a high potency for the USP1/UAF1 complex (IC_{50}=0.88 μM).
IC_{50} & Target	0.88 μM (USP1)[1]
In Vitro	Pretreatment of USP1/UAF1 with C527 resulted in inhibition of its enzyme activity with an IC_{50} of 0.88±0.03 μM. C527 inhibits the DUB activity of the USP12/USP46 complex and other DUB enzymes in vitro. However, the IC_{50} of C527 for these DUB enzymes was higher in comparison with USP1/UAF1 complex. C527 has considerably less inhibitory effect on UCH-L1 and UCH-L3, a different subclass of DUB enzymes. C527 treatments causes an increase in the levels of Ub-FANCD2 and Ub-FANCI. Pretreatment of cells with the C527 causes an enhancement in the cytoxicity of mitomycin C and camptothecin. C527 treatments lead to an increase in ubiquitinated forms of FANCD2 and FANCI, cause a decrease in homologous recombination activity, and sensitize cells to DNA damaging agents[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [1]	HeLa cells are treated with DMSO or C527 (0.5, 1, 5 μM) in appropriate medium for 24 to 72 hours. The viable cell counts are determined using Trypan Blue staining, CellTiter-Glo reagent or MTT assay[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- EMBO J. 2022 Jul 11;e108791.

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REFERENCES

[1]. Mistry H, et al. Small-molecule inhibitors of USP1 target ID1 degradation in leukemic cells. Mol Cancer Ther. 2013 Dec;12(12):2651-62.

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