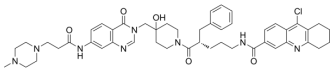
XL177A

Cat. No.:	HY-138794
CAS No.:	2417089-74-6
Molecular Formula:	$C_{48}H_{57}ClN_8O_5$
Molecular Weight:	861.47
Target:	Deubiquitinase
Pathway:	Cell Cycle/DNA Damage
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (29.02 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.1608 mL	5.8040 mL	11.6081 mL
5 mM	0.2322 mL	1.1608 mL	2.3216 mL
10 mM	0.1161 mL	0.5804 mL	1.1608 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (2.41 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (2.41 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

XL177A is a highly potent and selective irreversible USP7 inhibitor with an IC_{50} of 0.34 nM. XL177A elicits cancer cell killing through a p53-dependent mechanism[1].

In Vitro

XL177A is a potent USP7 inhibitor and p53 stabilizer in cyto. XL177A suppresses cancer cell growth predominantly through a p53-dependent mechanism. XL177A labels the catalytic cysteine, C223, of USP7 with exquisite selectivity for USP7 across the DUBome and human proteome[1].

XL177A (1 μM) induces complete G1 arrest in MCF7 cells after 24 hours[1].

Treatment of MCF7 cells, which express WT TP53, with XL177A (0.001- 10 μM) induces rapid degradation of HDM2 within 2 hours, followed by increases in p53 and downstream p21 protein levels[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

Cell Line:	MCF7 cells
Concentration:	0.001, 0.01, 0.1, 1, 10 μM
Incubation Time:	18-24 hours
Result:	The p53 and p21 protein levels remained high, but MDM2 protein levels matched DMSO control.

REFERENCES

[1]. Nathan J Schauer, et al. Selective USP7 inhibition elicits cancer cell killing through a p53-dependent mechanism. Sci Rep.2020 Mar 24;10(1):5324.

Caution: Product has not been fully validated for medical applications. For research use only.

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