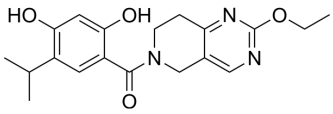
CPUY201112

Cat. No.:	HY-111524
CAS No.:	1860793-58-3
Molecular Formula:	$C_{19}H_{23}N_3O_4$
Molecular Weight:	357.4
Target:	HSP; Apoptosis
Pathway:	Cell Cycle/DNA Damage; Metabolic Enzyme/Protease; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

CPUY201112 is a potent heat shock protein Hsp90 inhibitor with K_d of 27 nM. CPUY201112 induces p53-mediated apoptosis in MCF-7 cells, resulting in cell cycle arrest, which can be used in cancer research[1].

In Vitro

CPUY201112 (0-9 μM, 7 days) reduces the viability of multiple cancer cell lines such as HCT116 colon cells, HepG2 hepatocellular carcinoma and other cancer cells in a dose-dependent manner[1].
CPUY201112 (0-2 μM, 24 h) can induce apoptosis in a dose-dependent manner[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[1]

Cell Line:	HCT116, HepG2, MCF-7, A549
Concentration:	0-9 μM
Incubation Time:	7 days
Result:	Inhibited MCF-7, A549, HCT116 and HepG2 cells with the IC_{50} values of 0.624, 0.543, 0.763 and 0.342 μM, respectively.

Apoptosis Analysis[1]

Cell Line:	MCF-7 and HCT116 cells
Concentration:	0-2 μM
Incubation Time:	24 h
Result:	Induced cell cycle arrest in G2/M phase and induced apoptosis in more than 35% of MCF-7 cells. Induced p53-mediated apoptosis in HCT116 cells.

In Vivo

CPUY201112 (5-40 mg/kg, i.p., daily, 3 weeks) inhibits tumor growth in the MCF-7 tumor xenograft model[1].
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Animal Model:	Female BALB/c nude mice with MCF-7 cell[1]

Dosage:	5 mg/kg, 20 mg/kg and 40 mg/kg
Administration:	i.p., daily, 3 weeks
Result:	Reduced tumor volume by 11.92%, 26.58% and 39.63%, respectively, when using 5 mg/kg, 20 mg/kg and 40 mg/kg. Significantly induced the expression of Hsp70 and reduced the expression of Akt at 40 mg/kg.

REFERENCES

[1]. Xiao-Li X, et al. CPUY201112, a novel synthetic small-molecule compound and inhibitor of heat shock protein Hsp90, induces p53-mediated apoptosis in MCF-7 cells. Sci Rep. 2016 Jan 8;6:19004.

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