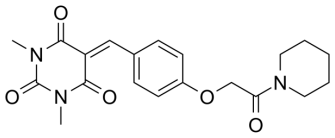
PARP1-IN-10

Cat. No.:	HY-149003
CAS No.:	2494001-21-5
Molecular Formula:	$C_{20}H_{23}N_3O_5$
Molecular Weight:	385.41
Target:	PARP; Apoptosis
Pathway:	Cell Cycle/DNA Damage; Epigenetics; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	PARP1-IN-10 (compound 12c) is a no-cytotoxicity and potent PARP1 inhibitor with an IC_{50} value of 50.62 nM in vitro. PARP1-IN-10 causes cell cycle arrest at G2/M phase and apoptosis, and enhances the cytotoxicity of temozolomide (TMZ) [1].
IC_{50} & Target	PARP1 50.62 nM (IC_{50}, [1])

In Vitro

PARP1-IN-10 (compound 12c) (10 μM, 48 h) shows no cytotoxic effects against NCI-60 human tumor cell lines[1].
PARP1-IN-10 inhibits MDA-MB-436 cell line with an IC_{50} value of 3.73 μM[1].
PARP1-IN-10 (1 and 3.73 μM, 48 h) causes cell cyle arrest at G2/M with dose-dependent manner[1].
PARP1-IN-10 (0.5 μM, 48 h) shows antiprolifetative effect of temozolomide (TMZ) about 7 times (IC_{50} = 3.64 μM) in A549 cell line compared to TMZ alone (IC_{50}=24.2 μM)[1].

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

Cell Cytotoxicity Assay[1]

Cell Line:	NCI-60 human tumor cells
Concentration:	10 μM
Incubation Time:	48 hours
Result:	Showed no toxicity.

Cell Cycle Analysis[1]

Cell Line:	MDA-MB-436 cells
Concentration:	0, 1, 3.73 μM
Incubation Time:	48 hours
Result:	Caused cell cycle arrest at G2/M and showed apoptotic effect in dose-dependent manner.

Apoptosis Analysis[1]

Cell Line:	A549 human lung cancer cells

Concentration:	0, 0.5, 7.94 μM
Incubation Time:	48 hours
Result:	Potentiated the antiproliferative effect of temozolomide (TMZ) 7 times compared with TMZ alone.

REFERENCES

[1]. Essam Eldin A. Osman, et al. Design and synthesis of some barbituric and 1,3-dimethylbarbituric acid derivatives: A non-classical scaffold for potential PARP1 inhibitors. Bioorg Chem. 2020 Aug; 104: 104198.

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