TZ9

Cat. No.: HY-18643

CAS No.: 1002789-86-7

Molecular Formula: $C_{17}H_{14}N_6O_4$

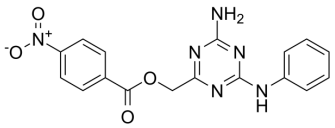
Molecular Weight: 366.33

Target: E1/E2/E3 Enzyme; Apoptosis

Pathway: Metabolic Enzyme/Protease; Apoptosis

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 40 mg/mL (109.19 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.7298 mL	13.6489 mL	27.2978 mL
5 mM	0.5460 mL	2.7298 mL	5.4596 mL
10 mM	0.2730 mL	1.3649 mL	2.7298 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: ≥ 2.5 mg/mL (6.82 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.68 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

TZ9 is a selective Rad6 inhibitor. TZ9 inhibits Rad6B-induced histone H2A ubiquitination, downregulates intracellular β-catenin, induces G2-M arrest and apoptosis, and inhibits the proliferation and migration of metastatic human breast cancer cells[1].

In Vitro

TZ9 (Rad6B SMI #9) (0.5-100 μM; 72 h) inhibits MDA-MB-231 cell proliferation and migration[1].
TZ9 (0.1-5 μM; 24-72 h) delays cell-cycle progression in MDA-MB-231 cells[1].
TZ9 (5 μM; 8-48 h) induces apoptosis in MDA-MB-231 cells[1].
TZ9 (0.5, 1, 2.5, 5 μM; 24 h) inhibits H2A ubiquitination and downregulates levels of PCNA and β-catenin protein in MDA-MB-231 cells[1].

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

Cell Proliferation Assay[1]

Cell Line:	MDA-MB-231 cells
Concentration:	0.5-100 μM
Incubation Time:	72 h
Result:	Inhibited MDA-MB-231 cell proliferation with IC_{50} ~6μM.

Apoptosis Analysis[1]

Cell Line:	MDA-MB-231 cells
Concentration:	5 μM
Incubation Time:	8-48 h
Result:	Induced cells apoptosis.

Cell Cycle Analysis[1]

Cell Line:	MDA-MB-231 cells
Concentration:	0.1-5 μM
Incubation Time:	24-72 h
Result:	Increased the proportion of G2-M-arrested cells by 2-fold and was accompanied by a proportional decrease in S-phase cells when at 24 h. Significantly increased the percentage of cells with cytoplasmic/nuclear cyclin B1 staining.

Western Blot Analysis[1]

Cell Line:	MDA-MB-231 cells
Concentration:	0.5, 1, 2.5, 5 μM
Incubation Time:	24 h
Result:	Inhibited H2A ubiquitination, decreased PCNA and β-catenin protein levels.

CUSTOMER VALIDATION

- Int J Mol Sci. 2023 Apr 3, 24(7), 6683.
- Biochem Bioph Res Co. 2020 Oct 20;531(3):402-408.

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REFERENCES

[1]. Sanders MA, et al. Novel inhibitors of Rad6 ubiquitin conjugating enzyme: design, synthesis, identification, and functional characterization. Mol Cancer Ther. 2013 Apr;12(4):373-83.

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

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