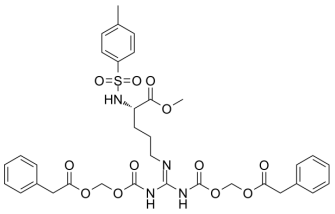
proTAME

Cat. No.:	HY-124955
CAS No.:	1362911-19-0
Molecular Formula:	$C_{34}H_{38}N_4O_{12}S$
Molecular Weight:	726.75
Target:	APC
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 : 100 mg/mL (137.60 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.3760 mL	6.8799 mL	13.7599 mL
	5 mM	0.2752 mL	1.3760 mL	2.7520 mL
	10 mM	0.1376 mL	0.6880 mL	1.3760 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 3.75 mg/mL (5.16 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

proTAME, a cell-permeable proagent form of TAME, is an anaphase promoting complex/cyclosome (APC/C) inhibitor. proTAME causes cell cycle arrest in metaphase[1][2].

In Vitro

ProTAME prevents anaphase entry in mouse and bovine oocytes and also in mouse 2-cell embryos. proTAME (0-100 μM) treatment shows dose-dependent metaphase arrest in mammalian oocytes and early cleavage embryos. And the metaphase arrest induced by this drug does not require spindle assembly checkpoint (SAC) activity[1].

ProTAME arrest of meiosis I in mouse oocytes is due to the inhibition of APC/C. In contrast to the somatic cells, the arrest in oocytes and embryos is not reversible[1].

proTAME (0-20 μM) dose-dependently affects morphological parameters of the spindle in oocytes and in embryos[1].

proTAME is efficient in overcoming resistance caused by the hyperphosphorylation of CDH1 in glioblastoma cells, polo-like kinase 1 (PLK1)-based drug resistance in ovarian cancer cells and CDC20-based resistance in diffuse large B-cell lymphoma [1].

proTAME inhibits OVCAR-3 cells growth with an IC_{50} of 12.5 μM[2].

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

CUSTOMER VALIDATION

- Nat Commun. 2022 Dec 13;13(1):7732.

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REFERENCES

[1]. Lenka Radonova, et al. ProTAME Arrest in Mammalian Oocytes and Embryos Does Not Require Spindle Assembly Checkpoint Activity. Int J Mol Sci. 2019 Sep 13;20(18):4537.

[2]. Monika Raab, et al. Blocking Mitotic Exit of Ovarian Cancer Cells by Pharmaceutical Inhibition of the Anaphase-Promoting Complex Reduces Chromosomal Instability. Neoplasia. 2019 Apr;21(4):363-375.

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