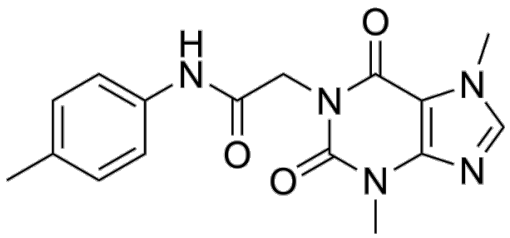
Product Data Sheet

Product Name: T-1-PMPA
Cat. No.: GC73795

Chemical Properties

Cas. No.	1323883-62-0		
Formula	$C_{16}H_{17}N_5O_3$	M.Wt	327.34
Solubility	DMSO : 100 mg/mL (305.49 mM; Need ultrasonic)	Storage	-20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			



Background

T-1-PMPA is a potent EGFR inhibitor with apoptotic properties. T-1-PMPA effectively inhibits

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EGFRWT and EGFR790m, with IC50 values of 86 nM and 561.73 nM, respectively.

T-1-PMPA (0.312-10 μM; 24 h) shows significant suppression of the proliferation of HepG2 and MCF7 malignant cell lines, with IC50 values of 3.51 μM and 4.13 μM, respectively[1]. In HepG2 cells, T-1-PMPA increases the proportion of cells in the early stage of apoptosis from 0.77 to 29.17%, the late stage of apoptosis from 0.17 to 8.81%, and the overall stage from 3.05 to 42.03%. Additionally, the percentage of necrotic cells increased to 4.05% compared to 2.21% in the control cells. The qRT-PCR analysis further supported the apoptotic effects by revealing significant increases in the levels of caspase-3 and caspase-9. T-1-PMPA controlls the levels of TNFα and IL2 by 74 and 50%[1].

References:
[1]. Ibrahim H Eissa, et al. New Theobromine Apoptotic Analogue with Anticancer Potential Targeting the EGFR Protein: Computational and In Vitro Studies. ACS Omega. 2024 Mar 27;9(14):15861-15881.

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