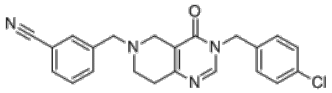
ProbeChem®
Expedite Your Scientific Research

WWW.PROBECHEM.COM

Data Sheet

Global Supplier of Chemical Probes, Inhibitors & Agonists.

Product Name	:	TR-107
Cat. No.	:	PC-49211
CAS No.	:	2485052-87-5
Molecular Formula	:	$C_{22}H_{19}ClN_4O$
Molecular Weight	:	390.871
Target	:	Other Targets
Solubility	:	10 mM in DMSO



Biological Activity

TR-107 (TR107) is a highly potent, selective and orally bioavailable small-molecule activator of the **mitochondrial protease ClpP** with EC50 of 140 nM, binds to purified ClpP with Kd value of 180 nM in surface plasmon resonance (SPR) measurement.
TR-107 dose-dependent increases ClpP activity, inhibits breast cancer cell MDA-MB-231 and SUM159 growth (IC50=23 and 12 nM) in a ClpP-dependent manner, without a significant increase in apoptosis.
TR-107 showed significantly enhanced potency of cell growth inhibition in the MDA-MB-231 and SUM159 cell models compared with ONC201 and ONC206.
TR-107 (100 nM, 6-24 h) induces time- and dose-dependent reduction of multiple mitochondrial proteins (TUFM and TFAM, aconitase (ACO2) and isocitrate dehydrogenase (IDH2), and succinate dehydrogenase A (SDHA) and complex I subunit NDUFS3).
TR-107 reduces mitochondrial metabolic functions and inhibits OXPHOS in MDA-MB-231 cells.
TR-107 (4-8 mg/kg, p.o.) prevents tumor growth in MDA-MB-231 xenograft model.

References

Fennell EMJ, et al. ***Pharmacol Res Perspect.*** 2022 Aug;10(4):e00993.

E-mail: tech@probechem.com