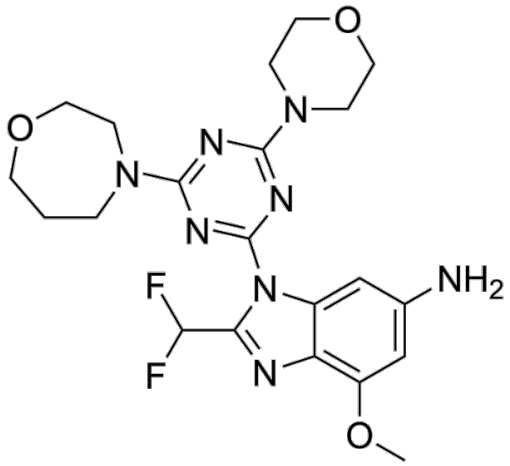
Product Data Sheet

Product Name: KTC1101
Cat. No.: GC73992

Chemical Properties

Cas. No.	2764833-47-6		
Formula	$C_{21}H_{26}F_2N_8O_3$	M.Wt	476.48
Solubility	DMSO : 33.33 mg/mL (69.95 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

KTC1101 is an orally active pan-PI3K inhibitor. KTC1101 can inhibit the PI3K signaling pathway, reduce downstream AKT and mTOR phosphorylation, and reduces the expression of Ki67. The anti-tumor effect of KTC1101 has a dual mechanism of action: directly inhibiting tumor cell growth and dynamically enhancing immune response.

Caution: Product has not been fully validated for medical applications. For research use only.
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KTC1101 (0.1-50000 nM, 48 h) can dose-dependently induce cell cycle stagnation in G1 phase in all tested cell lines (PC3, TMD8, HSC2, HSC4, and CAL33 cells). KTC1101 has anti-proliferative activity, with the IC50 ranging from 20 nM to 130 nM, but has no significant promotion of apoptosis[1].KTC1101 (0.1-1000 nM, 1 h) exhibits significant inhibitory activity against all PI3K isoforms in the Adapta kinase assay. The IC50 values of KTC1101 for PI3Kα, PI3Kβ, PI3Kδ and PI3Kγ are 3.72 nM, 36.29 nM, 1.22 nM and 17.09 nM respectively[1].KTC1101 (0-125 nM, 48 h) effectively inhibits the PI3K signaling pathway in WB experiments, reduces the phosphorylation of PI3K downstream effectors AKT and mTOR[1].

KTC1101 (0-125 mg/kg/day for 14 days, p.o.) can arrest tumor growth in mice with human tumor xenografts and show no signs of recurrence[1].Pharmacokinetic Analysis in tumor xenograft mouse model[1]

References:
[1]. Peng X, et al. A novel pan-PI3K inhibitor KTC1101 synergizes with anti-PD-1 therapy by targeting tumor suppression and immune activation. Mol Cancer. 2024 Mar 14;23(1):54.

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