Product Data Sheet

Product Name: AP4-43
Cat. No.: GC79108

Chemical Properties

Cas. No.

Formula	$C_{16}H_{11}BrF_3N_3$	M.Wt	382.18
Solubility	DMSO: 100 mg/mL (261.66 mM; Need ultrasonic)	Storage	Store at 4°C, away from moisture
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

Product Data Sheet

Background

AP4-43 is an orally active CLK1, CLK4, PI3K, DDR1, EGFR and NEK4 inhibitor. AP4-43 reduces growth of mammalian colorectal cancer organoids. AP4-43 improves survival in a transgenic Drosophila model of KRAS -mutant colorectal cancer. AP4-43 can be used for the research of KRAS -mutant colorectal cancer [1].

In Vivo, AP4-43 (1-100 μM; p.o.; continuous feeding in media) enhances survival of a patient-matched Drosophila colorectal cancer model by targeting a multi-kinase network including CLK1 and NEK4, with synergistic efficacy observed when combined with reduced NEK4 gene dosage, reaching 78.5% survival in this context[1].

In Vitro, AP4-43 (10 pM-100 μM; 72 hr) inhibits the viability of SW620 human KRAS-driven colorectal cancer cells with an IC_{50} of 2.23 μM and SW837 cells with an IC_{50} of 15.41 μM[1]. AP4-43 (2 μM) reduces the growth of AKP mouse KRAS-mutant colorectal cancer organoids more effectively than 2 μM Regorafenib [1]. AP4-43 (2 μM; 24 hr) inhibits CLK1-dependent Wnt/β-catenin signalling and CLK4-dependent NF-κB activation in AKP mouse KRAS-mutant colorectal cancer organoids, without affecting PI3K-AKT or RAS-MAPK pathway activity[1].

References:
[1]. Badmos HA, et al. Chemical programming of kinase inhibitors in a modular chemputer-based system. Commun Biol. Published online March 27, 2026.

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