

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



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

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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 μ M; 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 μ M; 72 hr) inhibits the viability of SW620 human KRAS-driven colorectal cancer cells with an IC₅₀ of 2.23 μ M and SW837 cells with an IC₅₀ of 15.41 μ M[1]. AP4-43 (2 μ M) reduces the growth of AKP mouse KRAS-mutant colorectal cancer organoids more effectively than 2 μ M Regorafenib [1]. AP4-43 (2 μ M; 24 hr) inhibits CLK1-dependent Wnt/ β -catenin signalling and CLK4-dependent NF- κ B 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.

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