

Product Data Sheet

Product Name: HJ-4
Cat. No.: GC79868

Chemical Properties

Cas. No. 1313741-00-2

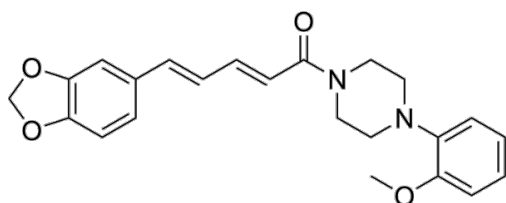
Formula $C_{23}H_{24}N_2O_4$ M.Wt 392.45

Solubility DMSO: 4 mg/mL (10.19 mM); ultrasonic and warming and heat to 60°C) Storage Store at -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

HJ-4 is a Piperine derivative. HJ-4 potently inhibits the proliferation of CRC cells by dose-dependently reducing colony formation and DNA synthesis. HJ-4 markedly suppresses the adhesion, migration, invasion and induces apoptosis of CRC cells. HJ-4 demonstrates anti-tumor efficacy in chicken embryo chorioallantoic membrane (CAM) model implanted with HCT116/SW480 tumor spheroids. HJ-4 can be used for the study of colorectal cancer (CRC) [1].

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

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In Vivo, HJ-4 (8-32 μ M, local application to tumor site, once daily for 7 days) inhibits angiogenesis in chicken embryo chorioallantoic membrane (CAM) model implanted with HCT116/SW480 tumor spheroids^[1].

In Vitro, HJ-4 (3.125-100 μ M, 24 h) inhibits viability of CRC cells (HCT116: IC₅₀ = 15.82 μ M; SW480: IC₅₀ = 20.46 μ M)^[1]. HJ-4 (8-32 μ M, 48 h) reduces colony number and size of HCT116/SW480 cells^[1]. HJ-4 (8-32 μ M, 24 h) decreases EdU-positive HCT116/SW480 cells in EdU incorporation assay, dose-dependently inhibiting DNA synthesis^[1]. HJ-4 (8-32 μ M, 0-48 h) inhibits adhesion, migration, and invasion of HCT116/SW480 cells^[1]. HJ-4 (8-32 μ M, 24 h) upregulates p53, PUMA, BAX, cleaved caspase-3, cleaved PARP, and downregulates BCL-2, β -catenin, Cyclin D1 in HCT116/SW480 cells^[1]. HJ-4 (8-32 μ M, 24 h) increases p53/BAX expression in HCT116/SW480 cells, and promotes YO-PRO-1 (early apoptosis) and PI (late apoptosis) positive cells in HCT116 cells via YO-PRO-1/PI staining^[1].

References:

[1]. Zhang L, et al. HJ-4, a novel piperine derivative, inhibits tumor growth and angiogenesis via p53 activation and oncogenic pathway inhibition in colorectal cancer models. Sci Rep. 2025 Sep 29;15(1):33541.

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