Product Data Sheet

Product Name: GA-017
Cat. No.: GC65116

Chemical Properties

Cas. No.	2351906-74-4		
Formula	C18H21N3O4	M.Wt	343.38
Solubility	DMSO : 20.83 mg/mL (60.66 mM; ultrasonic and warming and heat to 80°C)	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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	GA-017		

Protocol

Cell experiment [1]:

Cell lines	Human ovarian adenocarcinoma cell line SKOV3

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Preparation Method	SKOV3 cells were seeded in a medium supplemented with (3D) or without (2D) 0.015% gellan gum and treated with GA-017 or DMSO for the indicated time. Cells were then lysed with RIPA buffer containing Halt Protease and Phosphatase Inhibitors. Samples were separated by SDS-PAGE, and the proteins in the gel were electrophoretically transferred onto a PVDF membrane. The blot was then blocked and incubated with antibodies. Next, the blot was incubated with peroxidase-conjugated anti-immunoglobulin. Sites of antibody binding were visualized using the ECL Western blotting detection system and were subjected to densitometry analysis using ImageJ and normalized to β-Actin expression.
Reaction Conditions	1 - 20μM, 1 - 6h
Applications	GA-017 inhibited the phosphorylation of YAP/TAZ in a dose-dependent manner under both 2D and 3D culture conditions and the inhibitory effect of GA-017 continued for 6h.

Animal experiment [2]:

Animal models	Ferredoxin 1 (FDX1)-knockdown colorectal cancer mouse model

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Preparation Method	Eighteen female nude BALB/c mice (5 - 6 weeks, 18 - 20g) were kept at 24°C - 25°C and 50% - 60% humidity, with free access of standard food and water. Animals were randomly divided into LV-NC group, LV-FDX1 group and LV-FDX1+GA-017 group (n = 6 per group). To induce the tumor-bearing model, 0.1mL of cell suspension was subcutaneously inoculated (2×10^6 cells per mouse) in nude mice. LV-NC and LV-FDX1 were used for gene knockdown. To inhibit Hippo pathway, GA-017 (2.5mg/kg) was intraperitoneally injected into LV-FDX1-treated mice. Mouse body weights were recorded weekly. Four weeks after injection, tumor weight and size were measured.
Dosage form	2.5mg/kg/day, 4 weeks, i.p.
Applications	GA-017 significantly decreased the body weight of mice while notably increasing tumor weight and size.

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References:
[1] Aihara A, Iwawaki T, Abe-Fukasawa N, et al. Small molecule LATS kinase inhibitors block the Hippo signaling pathway and promote cell growth under 3D culture conditions[J]. Journal of Biological Chemistry, 2022, 298(4): 101779.
[2] Hu Y, Liu H, Tan X, et al. Knocking down ferredoxin 1 inhibits the progression of colorectal Cancer and regulates Cuproptosis via mediating the Hippo signaling pathway[J]. Molecular Carcinogenesis, 2025, 64(5): 911-922.

Background

GA-017 is a selective and potent small-molecule inhibitor of LATS1 and LATS2 kinases, with IC_{50} values of 4.10 ± 0.79nM for LATS1 and 3.92 ± 0.42nM for LATS2, respectively[1]. GA-017 is typically used for research in 3D cell culture systems,

organoid expansion, and Hippo signaling pathway modulation[1][2].

GA-017 (1 - 20μM, 1 - 6h) inhibited the phosphorylation of YAP/TAZ in a dose-dependent manner under both 2D and 3D culture conditions and the inhibitory effect of GA-017 continued for 6h in SKOV3 cells[1]. GA-017 (10μM, 7 days) visibly increased both cell aggregate size and total cell number in the BCE C/D-1b cells[3].

GA-017 (2.5mg/kg/day, 4 weeks, i.p.) significantly decreased the body weight of mice while notably increasing tumor weight and size in the Ferredoxin 1 (FDX1)-knockdown colorectal cancer mouse model. GA-017 (2.5mg/kg/day, 4 weeks, i.p.) significantly increased the number of Ki67-positive cells in the FDX1-knockdown colorectal cancer mouse model. GA-017 (2.5mg/kg/day, 4 weeks, i.p.) significantly suppressed the production of pyruvate and α-ketoglutarate in the FDX1-knockdown colorectal cancer mouse model[4].

References:
[1] Aihara A, Iwawaki T, Abe-Fukasawa N, et al. Small molecule LATS kinase inhibitors block the Hippo signaling pathway and promote cell growth under 3D culture conditions[J]. Journal of Biological Chemistry, 2022, 298(4): 101779.
[2] Xu Z, Xu X, Mi Y, et al. Identifying the Role of YAP in the Development of Rumen Epithelium Using 3D Organoid[J]. Stem Cells International, 2025, 2025(1): 5105796.
[3] Abe-Fukasawa N, Hayashi R, Morita M, et al. Ex vivo expansion of corneal endothelial cells enabled by small molecule inhibitors of LATS kinase[J]. Regenerative Therapy, 2025, 30: 730-739.
[4] Hu Y, Liu H, Tan X, et al. Knocking down ferredoxin 1 inhibits the progression of colorectal Cancer and regulates Cuproptosis via mediating the Hippo signaling pathway[J]. Molecular Carcinogenesis, 2025, 64(5): 911-922.

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