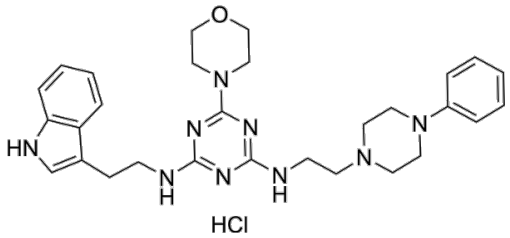
Product Data Sheet

Product Name: FOXM1-IN-3
Cat. No.: GC81453

Chemical Properties

Cas. No.			
Formula	$C_{29}H_{38}ClN_9O$	M.Wt	564.12
Solubility		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

FOXM1-IN-3 is a potent FOXM1 inhibitor. FOXM1-IN-3 downregulates FOXM1 expression at protein and mRNA levels, suppressing downstream effectors CCNB1 and CDC25. FOXM1-IN-3 induces G2/M cell cycle arrest and apoptosis in colorectal cancer cells. FOXM1-IN-3 inhibits colony formation and cell migration in colorectal cancer cells. FOXM1-IN-3 targets the cancer stem cell phenotype in colorectal cancer cells, reducing cancer stem cell marker expression. FOXM1-IN-3 reduces tumor growth in a zebrafish xenograft model. FOXM1-IN-3 can be used for the research of colorectal

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cancer [1].

In Vivo, FOXM1-IN-3 (compound 14) (5-10 μM; immersion; 72 hours) inhibits tumor growth in a zebrafish xenograft model, with the most pronounced effect in the SW620 line (80.95% tumor growth at 10 μM relative to control)[1].

In Vitro, FOXM1-IN-3 (compound 14) (6.25-100 μM; 24 h) potently inhibits proliferation in SW620 and SW480 colorectal cancer cells with IC_{50} values of 14.9 μM and 17.5 μM, respectively, and shows favorable selectivity over normal CCD841 cells (IC_{50} of 36.65 μM)[1]. FOXM1-IN-3 (0.75-3 μM; 7 days) almost completely inhibits colony formation in SW480 and SW620 cells at 3 μM, reflecting long-term antiproliferative effects[1]. FOXM1-IN-3 (6.25-25 μM; 48 h) suppresses cell migration in SW480 cells at 6.25 μM and in SW620 cells at 12.5 μM over 48 h[1]. FOXM1-IN-3 shows measurable inhibition of PI3Kβ, γ, and δ[1]. FOXM1-IN-3 (6.25-25 μM; 24 h) downregulates FOXM1 and its downstream effectors CCNB1 and CDC25 in SW480 and SW620 cells at concentrations as low as 6.25 μM[1]. FOXM1-IN-3 (6.25-25 μM; 24 h) causes G2/M phase arrest in SW480 and SW620 cells, correlating with FOXM1 downregulation[1]. FOXM1-IN-3 (6.25-25 μM; 24 h) induces apoptosis in SW480 and SW620 cells at 12.5 μM and 25 μM[1]. FOXM1-IN-3 (10 μM; 24 h, 48 h) selectively targets cancer stem cell (CSC) phenotypes in SW480 and SW620 cells at 10 μM, with mild and reversible effects on normal CCD841 cells[1]. FOXM1-IN-3 has high passive permeability, low CYP interference, notable hepatotoxicity (IC_{50} ~5.6 μM in HepG2), and lower neurotoxicity (IC_{50} ~17 μM in SH-SY5Y)[1].

References:
[1]. Kułaga D, et al. Chemical modification of STL427944 toward morpholine-based 1,3,5-triazines as anticancer agents targeting FOXM1: green synthesis, biological evaluation and ADME-Tox profiling in a colorectal cancer model. Eur J Med Chem. 2026;304:118532.

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