

Product Data Sheet

Product Name: SHMT2-IN-1

Cat. No.: GC81596

Chemical Properties

Cas. No.

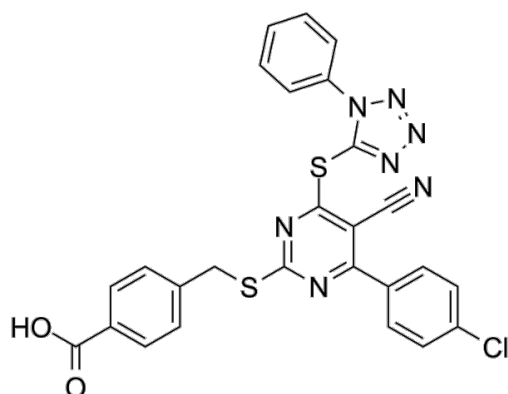
Formula $C_{26}H_{16}ClN_7O_2S_2$ M.Wt 558.03

Solubility DMSO: 100 mg/mL (179.20 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

SHMT2-IN-1 is a potent serine hydroxymethyltransferase 2 (SHMT2) inhibitor with an IC_{50} of 1.21 μ M and a K_D of 10.6 μ M. SHMT2-IN-1 binds to the folate binding site of SHMT2. SHMT2-IN-1 also inhibits SHMT1 with an IC_{50} of 1.83 μ M. SHMT2-IN-1 can inhibit cancer cells proliferation, migration and invasion. SHMT2-IN-1 can induce cells apoptosis and ROS production and cause G2/M phase arrest. SHMT2-IN-1 can be used for the research of cancer, such as esophageal cancer [1].

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

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In Vitro, SHMT2-IN-1 (0.1-10 μ M, 24 h) exhibits potent antiproliferative activity against esophageal cancer cells KYSE-450 and KYSE-70 with IC₅₀ values of 1.62 μ M and 1.18 μ M respectively^[1]. SHMT2-IN-1 (2.5-10 μ M, 24 h) dose-dependently inhibits the migration and invasion of KYSE-450 and KYSE-70 cells^[1]. SHMT2-IN-1 (2.5-7.5 μ M, 24-72 h) induces apoptosis, ROS production and cause G2/M phase arrest in KYSE-450 and KYSE-70 cells^[1].

References:

[1]. Akram HMB, et al. Discovery of W478, a novel SHMT2 inhibitor for the treatment of esophageal carcinoma. Bioorg Chem. 2025 Oct;165:109028.

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