
Product Data Sheet

Product Name: L82
Cat. No.: GC67785

Chemical Properties

Cas. No. 329227-30-7

Formula $C_{11}H_8ClN_5O_4$ M.Wt 309.67

Solubility DMSO : 33.33 mg/mL (107.63 mM; Need ultrasonic) 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

L82 is a selective and uncompetitive **DNA ligase 1 (DNA Lig1)** inhibitor (hLig1 **IC₅₀**=12 μM). L82 shows anti-proliferative activity to breast cancer cells^{[1][2]}.

L82 (0-50 μM; 6 d) shows anti-proliferative activity to breast cancer cells^[2].

L82 (50 μM; 0-48 h) shows cytostatic activity due to activation of the G1/S checkpoint in MCF7 cells^[2].

Cell Proliferation Assay^[2]

Cell Line: MCF10A, MCF7, HCT116, and HeLa cells

Concentration: 0-50 μM

Incubation Time: 6 days

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

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Result: Reduced the proliferation of a normal breast epithelial cell line MCF10A and the breast cancer cell lines MCF7, HeLa and HCT116, in a concentration-dependent manner.

Cell Cycle Analysis^[2]

Cell Line: MCF7 cells

Concentration: 50 μ M

Incubation Time: 0-48 hours

Result: Showed a transient accumulation of cells at G2/M after 12 h, then showed an accumulation at G0/G1 that peaked after 24 h. Decreased in the S phase cell in accompany with the increase in the G0/G1 phase.

[1]. Howes TRL, et al. Structure-activity relationships among DNA ligase inhibitors: Characterization of a selective uncompetitive DNA ligase I inhibitor. DNA Repair (Amst). 2017 Dec;60:29-39.

[2]. Chen X, et al. Rational design of human DNA ligase inhibitors that target cellular DNA replication and repair. Cancer Res. 2008 May 1;68(9):3169-77.

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