

Product Data Sheet

Product Name: WX2-43
Cat. No.: GC79149

Chemical Properties

Cas. No. 723754-14-1

Formula $C_{17}H_{21}ClN_2$ M.Wt 288.82

Solubility DMSO: ≥ 100 mg/mL (346.24 mM) 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

WX2-43 is a PRMT5-KLF4 inhibitor (K_d of 11.0 nM). WX2-43 binds to the region between amino acids L400-M500 on PRMT5. WX2-43 efficiently intercepts the interaction between KLF4 and PRMT5, and blocks KLF4 methylation. WX2-43 decreases p21 levels and increases Bax levels. WX2-43 suppresses triple negative breast tumor progression. WX2-43 can be used in the research of triple-negative breast cancer and colorectal cancer [1] [2].

In Vivo, WX2-43 (40-80 mg/kg; i.p.; twice weekly; 4 weeks) suppresses triple negative breast tumor progression in nude mice^[1].

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

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In Vitro, WX2-43 (biotin-WX2-43; 0.1 nM-10 μ M; 2 h) binds to PRMT5 with a K_d of 11.0 nM [1]. WX2-43 (0.03-10 μ M; 24 h) inhibits cell viability in a KLF4-dependent manner in MEFs treated with cisplatin[1]. WX2-43 is more potent in TNBC cell lines (EC_{50} 0.44-0.96 μ M) than in normal mammary epithelial cell lines (EC_{50} 3.62-23.34 μ M)[1]. WX2-43 can induce a mesenchymal-like phenotype in two-dimensional (2D) AKPS cultures, altering colony morphology, size, and actin cytoskeleton, and reducing the frequency of Ki-67+ cells[2].

References:

- [1]. Zhou Z, et al. A novel small-molecule antagonizes PRMT5-mediated KLF4 methylation for targeted therapy. EBioMedicine. 2019;44:98-111.
- [2]. Borrelli C, et al. In vivo interaction screening reveals liver-derived constraints to metastasis. Nature. 2024;632(8024):411-418.

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