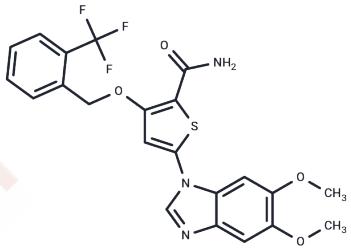
Data Sheet (Cat.No.T15454)

GW843682X

Chemical Properties



CAS No. : 660868-91-7

Formula: C22H18F3N3O4S

Molecular Weight: 477.46

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	GW843682X (GW843682) is a selective and ATP-competitive inhibitor of PLK1 and PLK3 (IC50s = 2.2 nM and 9.1 nM).
Targets(IC50)	CDK,Aurora Kinase,PDGFR,PLK,VEGFR
In vitro	GW843682X (500 nM) in combination with 5 μM VP-16 suppresses 50% of entry into mitosis in U937 cells. GW843682X inhibits the proliferation of U937 cells with an EC50 of 120 nM[1]. GW843682X (0.06-1μM) has inhibitory activities against the proliferation of acute leukemia cells and potentiates the anti-proliferative activity of vincristine. GW843682X (0.1-1μM) induces apoptosis of leukemia cells in a dose- and time-dependent manner. GW843682X (0.5-1μM) dephosphorylates Bcl-xl in leukemia cells[2]. GW843682X is effective in inhibition of growth of tumor cells, with IC50s of 0.41, 0.57, 0.11, 0.38, and 0.70 μM for A549, BT474, HeLa, H460 and HCT116 cell lines. GW843682X dose-dependently inhibits PLK1 phosphorylation of Ser15-p53 (IC50 = 0.14 μM). GW843682X (3 μM) causes strong G2-M arrest in HDF cells and H460 cells after treatment for 24, 48, and 72 h. GW843682X (5 μM) leads to apoptosis in H460 cells instead of HDF cells[3].

Solubility Information

Solubility	DMSO: 30 mg/mL (62.83 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0944 mL	10.4721 mL	20.9442 mL
5 mM	0.4189 mL	2.0944 mL	4.1888 mL
10 mM	0.2094 mL	1.0472 mL	2.0944 mL
50 mM	0.0419 mL	0.2094 mL	0.4189 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Didier C, et al. Evaluation of Polo-like Kinase 1 inhibition on the G2/M checkpoint in Acute Myelocytic Leukaemia. Eur J Pharmacol. 2008 Sep 4;591(1-3):102-5.

Zhu T, Zhao C, Gong R, et al.Comprehensive analysis reveals PLK3 as a promising immune target and prognostic indicator in glioma.Oncology Research.2025, 33(2): 431.

Ikezoe T, et al. A novel treatment strategy targeting polo-like kinase 1 in hematological malignancies. Leukemia. 2009 Sep;23(9):1564-76.

Lansing TJ, et al. In vitro biological activity of a novel small-molecule inhibitor of polo-like kinase 1. Mol Cancer Ther. 2007 Feb;6(2):450-9. Epub 2007 Jan 31.