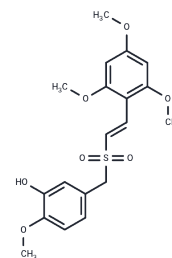


ON-013100

Chemical Properties

CAS No. : 865783-95-5
 Formula: C₁₉H₂₂O₇S
 Molecular Weight: 394.44
 Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.



Biological Description

Description	ON-013100 is an antineoplastic drug. ON-013100 also acts as a mitotic inhibitor that could inhibit Cyclin D1 expression.
Targets(IC50)	CDK
In vitro	ON 013100 effectively inhibits the proliferation of various cancer cell lines, including mantle cell lymphoma (MCL; JEKO-1 and MINO), breast (MCF7 and MDA-MB-231), gastric (AGS), and esophageal (OE19, OE33, FLO-1) at nanomolar concentrations (ON 013100 GI50=6.7-11.2 nM). It significantly modifies the cell cycle distribution, notably increasing the population of cells at the G2/M phase, with treatment at just 0.1 μM leading to G2/M phase arrest. Additionally, ON-013100 triggers apoptosis, demonstrating broad-spectrum anti-cancer activity in vitro[2][3].

Solubility Information

Solubility	DMSO: 25 mg/mL (63.38 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 1 mg/mL (2.54 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5352 mL	12.6762 mL	25.3524 mL
5 mM	0.507 mL	2.5352 mL	5.0705 mL
10 mM	0.2535 mL	1.2676 mL	2.5352 mL
50 mM	0.0507 mL	0.2535 mL	0.507 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Neel Jasani, et al. Potent anticancer activity of an orally bioavailable small molecule, ON 013100, and its water soluble derivative, briciclib, a clinical-stage eIF4E-targeted agent. AACR 106th Annual Meeting 2015; April 18-22, 2015; Philadelphia, PA.

Park IW, et al. Evaluation of novel cell cycle inhibitors in mantle cell lymphoma. *Oncogene*. 2007 Aug 16;26(38):5635-42.

Cho SY, et al. Determination of the glucuronide metabolite of ON 013100, a benzylstyrylsulfone antineoplastic drug, in colon cancer cells using LC/MS/MS. *J Pharm Biomed Anal*. 2013 Mar 5;75:138-44.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481