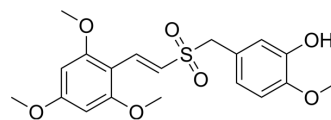


## ON-013100

<b>Cat. No.:</b>	HY-112822		
<b>CAS No.:</b>	865783-95-5		
<b>Molecular Formula:</b>	C <sub>19</sub> H <sub>22</sub> O <sub>7</sub> S		
<b>Molecular Weight:</b>	394.44		
<b>Target:</b>	CDK		
<b>Pathway:</b>	Cell Cycle/DNA Damage		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 25 mg/mL (63.38 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM	2.5352 mL	12.6762 mL	25.3524 mL
		5 mM	0.5070 mL	2.5352 mL	5.0705 mL
10 mM		0.2535 mL	1.2676 mL	2.5352 mL	
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: 1.25 mg/mL (3.17 mM); Clear solution; Need ultrasonic  2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 1.25 mg/mL (3.17 mM); Suspended solution; Need ultrasonic				

### BIOLOGICAL ACTIVITY

<b>Description</b>	ON-013100, an antineoplastic agent, acts a mitotic inhibitor that could inhibit Cyclin D1 expression.
<b>IC<sub>50</sub> &amp; Target</b>	Cdk4/cyclin D1
<b>In Vitro</b>	<p>ON-013100 induces apoptosis, and has activity against most human cancer cell lines in vitro. ON013100 significantly alters the cell cycle profile, dramatically increasing the number of cells in G2/M phase. Treatment of the cells with even 0.1 μM of ON013100 results in an arrest of the G2/M phase of the cell cycle<sup>[2]</sup>. ON 013100 inhibits the proliferation of MCL (JEKO-1 and MINO), breast (MCF7 and MDA-MB-231), gastric (AGS), and esophageal (OE19, OE33, and FLO-1) cancer cell lines at a nanomolar concentration (ON 013100 GI<sub>50</sub>=6.7-11.2 nM) <sup>[3]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

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## CUSTOMER VALIDATION

- Exp Cell Res. 2020 Oct 1;395(1):112177.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

- [1]. 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.
- [2]. Park IW, et al. Evaluation of novel cell cycle inhibitors in mantle cell lymphoma. Oncogene. 2007 Aug 16;26(38):5635-42.
- [3]. 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.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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