Web: www.taiclone.com
Tel: +886-2-2735-9682
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# Volasertib

## Catalog No: tcsc0274

### Available Sizes

**Size:** 5mg

**Size:** 10mg

**Size:** 50mg

**Size:** 100mg

### Specifications

**CAS No:**
755038-65-4

**Formula:**
$C_{34}H_{50}N_8O_3$

**Pathway:**
Cell Cycle/DNA Damage

**Target:**
Polo-like Kinase (PLK)

**Purity / Grade:**
>98%

**Solubility:**
DMSO : 50 mg/mL (80.80 mM; Need ultrasonic)

**Alternative Names:**
BI 6727

**Observed Molecular Weight:**
618.81

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## Product Description

Volasertib is a highly potent **PLK1** inhibitor with an **$IC_{50}$** of 0.87 nM, as well as the two closely related kinases **Plk2** and **Plk3** with **$IC_{50}$** values of 5 and 56 nM, respectively.

IC50 & Target: IC50: 0.87 nM (PLK1), 5 nM (PLK2), 56 nM (PLK3)[3]

***In Vitro:*** Volasertib is potent against HeLa and Caski cells with $IC_{50}$ values of 0.02 μM and 2.02 μM, respectively. Volasertib (0.03 μM) induces cell cycle arrest at G2/M Phase in cervical cancer cells. Volasertib (0.003-0.03 μM) induces apoptosis in HeLa cells, and Volasertib (0.3-3 μM) results in Caski cell apoptosis. Volasertib (1, 3 μM or 0.01,0.03 μM) augments the fluorescent intensity of DHE in Caski and HeLa cells in a dose-dependent manner[1]. Volasertib shows inhibitory activities against the proliferation of all 40 cell lines tested, with a mean half-maximal growth inhibitory concentration of 313 nM (range: 4-5000 nM)[2]. Volasertib inhibits proliferation of multiple cell lines derived from various cancer tissues, including carcinomas of the colon (HCT 116, $EC_{50}$=23 nM) and lung (NCI-H460, $EC_{50}$=21 nM), melanoma (BRO, $EC_{50}$=11 nM), and hematopoietic cancers (GRANTA-519, $EC_{50}$=15 nM; HL-60, $EC_{50}$=32 nM; THP-1, $EC_{50}$=36 nM and Raji, $EC_{50}$=37 nM) with $EC_{50}$ values of 11 to 37 nM. Volasertib (100 nM) causes G2-M arrest and induces apoptosis in NCI-H460 cells[3].

***In Vivo:*** Volasertib (15 mg/kg, i.p.) potentiates the activity of cisplatin to inhibit xenograft tumor growth of cervical cancer cells in nude mice[1]. Volasertib (70 mg/kg, p.o. once a week or 10 mg/kg, p.o. daily) significantly delays tumor growth in a non-small cell lung carcinoma xenograft model. In addition, Volasertib (15 mg/kg, i.v.) markedly suppresses tumor growth and is well tolerated[3].