**Product Name:** BI6727 (Volasertib)  
**Revision Date:** 7/5/2019

## Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product Name:</strong></td>
<td>BI6727 (Volasertib)</td>
</tr>
<tr>
<td><strong>Cas No.:</strong></td>
<td>755038-65-4</td>
</tr>
<tr>
<td><strong>M.Wt:</strong></td>
<td>618.83</td>
</tr>
<tr>
<td><strong>Formula:</strong></td>
<td>C34H50N8O3</td>
</tr>
<tr>
<td><strong>Synonyms:</strong></td>
<td>BI 6727; BI-6727</td>
</tr>
<tr>
<td><strong>Chemical Name:</strong></td>
<td>N-[4-[4-(cyclopropylmethyl)piperazin-1-yl]cyclohexyl]-4-[[[(7R)-7-ethyl-5-methyl-6-oxo-8-propan-2-yl-7H-pteridin-2-yl]amino]-3-methoxy benzamide</td>
</tr>
<tr>
<td><strong>Canonical SMILES:</strong></td>
<td>CCC1C(=O)N(C2=CN=C(N=C2N1C(C)C)NC3=C(C═C(C═C3)C═O)NC4CC(C(C4)N5CCN(CC5)CC6CC6)OC)C</td>
</tr>
<tr>
<td><strong>Solubility:</strong></td>
<td>≥10.3mg/mL in DMSO</td>
</tr>
<tr>
<td><strong>Storage:</strong></td>
<td>Store at -20°C</td>
</tr>
<tr>
<td><strong>General tips:</strong></td>
<td>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.</td>
</tr>
</tbody>
</table>
| **Shopping Condition:** | Evaluation sample solution: ship with blue ice  
All other available size: ship with RT, or blue ice upon request |

## Biological Activity

<table>
<thead>
<tr>
<th>Targets:</th>
<th>Cell Cycle/Checkpoint</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pathways:</td>
<td>PLK</td>
</tr>
</tbody>
</table>

**Description:**

BI6727 (Volasertib) is a selective inhibitor of Plk1, Plk2, and Plk3 with IC50 value of 0.87, 5 and 56 nM/L, respectively [1]. Polo-like kinase 1 (Plk1) is an early trigger for G2/M phase transition and is over-expressed in a variety of cancers for that being regarded as a promising target for cancer treatment [1].
BI6727 (Volasertib) is a potent Plk1 inhibitor and is regarded as a promising drug for multiple cancers in clinic. When tested with NB TICs and normal human pediatric SKPs (neural crest-like stem cells), BI6727 (Volasertib) treatment inhibits NB TICs with EC50 value of 21 nM/L and 2.8 μM/L on SKPs and decreased TIC survival [2]. It has been reported that BI6727 (Volasertib) inhibited proliferation of multiple cell lines, including HCT 116 (caicinomas of the colon), NCI-H460 (lung cancer), BRO (melanoma), GRANTA (hematopoietic cancers) with EC50 value of 23 nmol/l, 21 nmol/l, 11 nmol/l, 15 nmol/l, respectively [1] [3].

In nude mice model with HCT 16 cells (colon carcinoma) subcutaneous xenograft, oral administration of BI6727 (Volasertib) delays tumor growth, decreased tumor size and induced tumor regression by increasing the mitotic index and apoptosis. And the same results were achieved when tested with NCI-H4660 (non-small cell lung carcinoma), xenograft model [1].

Reference:

Protocol

Cell experiment:

Cell lines Human melanoma A375 and Hs 294T cells
Preparation method The solubility of this compound in DMSO is >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20 °C for several months.
Reacting conditions
Applications BI6727 (Volasertib) is a second generation small molecule Plk1 inhibitor and has been reported to be a promising agent for treatment of several cancers. BI6727 (Volasertib) inhibits growth, viability and induces apoptosis of melanoma cells.

Animal experiment [3]:

Animal models Patients aged ≥ 18 years with locally advanced or metastatic urothelial cancer
Dosage form BI6727 (Volasertib) was administered by 2-hour intravenous infusion
Applications

BI6727 (Volasertib) has an acceptable safety profile as a second-line treatment for advanced or metastatic urothelial cancer, but only modest antitumor activity for further evaluation as a monotherapy.

Other notes

Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Reference:


Product Citations


Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most ApexBio products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.