## Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product Name:</strong></td>
<td>Rigosertib (ON-01910,Estybon)</td>
</tr>
<tr>
<td><strong>Cas No.:</strong></td>
<td>1225497-78-8</td>
</tr>
<tr>
<td><strong>M.Wt:</strong></td>
<td>473.47</td>
</tr>
<tr>
<td><strong>Formula:</strong></td>
<td>C21H24NNaO8S</td>
</tr>
<tr>
<td><strong>Synonyms:</strong></td>
<td>ON-01910,Estybon</td>
</tr>
<tr>
<td><strong>Chemical Name:</strong></td>
<td>sodium;2-[2-methoxy-5-[[E]-2-(2,4,6-trimethoxyphenyl)ethenyl]sulfonylmethyl]anilino]acetate</td>
</tr>
<tr>
<td><strong>Canonical SMILES:</strong></td>
<td>COC1=C(C=C(C=C1)CS(=O)(=O)C=CC2=C(C=C(C2OC)OC)OC)NCC(=O)[O-].[Na+]</td>
</tr>
<tr>
<td><strong>Solubility:</strong></td>
<td>≥23.65mg/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>
<tr>
<td><strong>Description:</strong></td>
<td>Rigosertib (ON-01910,Estybon) is a potent, specific PLK1 inhibitor with IC50 value of 9nM. Rigosertib strongly inhibited the proliferation of cancer cell lines, with observed IC50 values in the nanomolar range for both HeLa (115 nM) and C33A (45 nM) cells. In contrast, rigosertib had a minimal effect on normal cell lines, BJ and Ect1/E6E7 (IC50 &gt; 0.1 mM) [1]</td>
</tr>
</tbody>
</table>
HeLa and C33A cells demonstrated a complete (>95%) G2/M arrest at concentrations of rigosertib >0.5 μM, whereas at Rigosertib has been reported to be a more potent radiosensitizer than cisplatin in vivo [1].

Reference:

Protocol

Cell experiment:

Cell lines HeLa 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 In HeLa cells, Rigosertib significantly inhibited PLK1 activity at all stages of the cell cycle. Moreover, the loss of PLK1 activity was not due to degradation of PLK1 or inhibition of PLK1 synthesis.

Animal experiment [3]:

Animal models Nude mice bearing Bel-7402, MCF-7 or MIA-PaCa cell xenografts

Dosage form 250 mg/kg; i.p.

Applications In nude mice bearing Bel-7402, MCF-7 or MIA-PaCa cell xenografts, Rigosertib (250 mg/kg) significantly inhibited tumor growth without obvious toxicity. In addition, Rigosertib completely inhibited PLK1 activity but partially reduced CDK1 activity.

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.

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