**Chemical Properties**

<table>
<thead>
<tr>
<th><strong>Product Name:</strong></th>
<th>Selonsertib (GS-4997)</th>
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<tbody>
<tr>
<td><strong>Cas No.:</strong></td>
<td>1448428-04-3</td>
</tr>
<tr>
<td><strong>M.Wt:</strong></td>
<td>445.49</td>
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<tr>
<td><strong>Formula:</strong></td>
<td>C24H24FN7O</td>
</tr>
</tbody>
</table>

**Chemical Name:** 5-(4-cyclopropyl-1H-imidazol-1-yl)-2-fluoro-N-(6-(4-isopropyl-4H-1,2,4-triazol-3-yl)pyridin-2-yl)-4-methylbenzamide  

**Canonical SMILES:** O=C(NC1=NC(C2=NN=CN2C(C(C3=CC(C(N4C=C(C5CC5)N=C4)=C(C)=C3)=C(C)=C3F  

**Solubility:** >44.5mg/ml in DMSO  

**Storage:** Store at -20°C  

**General tips:** 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.  

**Shopping Condition:** Evaluation sample solution: ship with blue ice  
All other available size: ship with RT, or blue ice upon request

**Biological Activity**

**Targets:** Apoptosis  

**Pathways:** ASK1  

**Description:** Selonsertib (GS-4997) is an apoptosis signal-regulating kinase 1 (ASK1) inhibitor. ASK1, a redox-sensitive mitogen-activated protein kinase kinase kinase, functions as a key signaling node by promoting deleterious effects. ASK1 activation can cause downstream activation of the terminal MAPK kinases p38 and c-Jun N-terminal kinase, which stimulate
production of inflammatory cytokines, induce fibrosis, promote apoptotic and necrotic cell death, increase aberrant cell proliferation, as well as contribute to metabolic perturbations.

In vitro: GS-4997 has been identified as a highly selective and potent ASK1 inhibitor that competed with ATP in the ASK1 catalytic kinase domain. Moreover, the ASK1 inhibition caused by GS-4997 was found to be significantly different in mechanism from bardoxolone methyl. GS-4997 could also shut down cell signaling involved in pathogenesis, while bardoxolone methyl activated mRNA transcription in every cell exposed to drug. In addition, GS-4997 could selectively target affected cells in which the oxidative burden was high [1].

In vivo: So far, there is no animal in vivo data released.

Clinical trial: The phase II study regarding delineating study population, efficacy outcomes, treatment period as well as statistical methods to resolve specific challenges for DKD study has been designed based on the biology of oxidative stress signaling through ASK1, the biology of DKD pathogenesis, and solid statistical methods [1].

Reference:

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.