Belumosudil (KD025) is a selective inhibitor of ROCK2 with IC\textsubscript{50}s of 105 nM and 24 µM for ROCK2 and ROCK1, respectively. Anti-fibrotic properties\textsuperscript{[1]}. 

In Vitro Belumosudil (SLx-2119; 40 µM) induces significant down-regulations of Tsp-1 and CTGF mRNA levels in PASMC. The microarray hybridized with aRNA from HMVEC treated with Belumosudil, shows a 5-times higher background than the other arrays\textsuperscript{[1]}. 

**SOLVENT & SOLUBILITY**

In Vitro

DMSO : 250 mg/mL (552.47 mM; Need ultrasonic)  
\[ \text{H}_2\text{O} : < 0.1 \text{ mg/mL (insoluble)} \]

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Mass (1 mg)</th>
<th>Mass (5 mg)</th>
<th>Mass (10 mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>2.2099 mL</td>
<td>11.0495 mL</td>
<td>22.0990 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.4420 mL</td>
<td>2.2099 mL</td>
<td>4.4198 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.2210 mL</td>
<td>1.1049 mL</td>
<td>2.2099 mL</td>
</tr>
</tbody>
</table>

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 50% PEG300 \(\gg\) 50% saline  
   Solubility: 3.33 mg/mL (7.36 mM); Suspended solution; Need ultrasonic

2. Add each solvent one by one: 10% DMSO \(\gg\) 40% PEG300 \(\gg\) 5% Tween-80 \(\gg\) 45% saline  
   Solubility: \(\geq 2.08 \text{ mg/mL (4.60 mM)}\); Clear solution

**BIOLOGICAL ACTIVITY**

**Description**
Belumosudil (KD025) is a selective inhibitor of ROCK2 with IC\textsubscript{50}s of 105 nM and 24 µM for ROCK2 and ROCK1, respectively. Anti-fibrotic properties\textsuperscript{[1]}. 

**IC\textsubscript{50} & Target**

<table>
<thead>
<tr>
<th>ROCK2</th>
<th>ROCK1</th>
</tr>
</thead>
<tbody>
<tr>
<td>105 nM (IC\textsubscript{50})</td>
<td>24 µM (IC\textsubcript{50})</td>
</tr>
</tbody>
</table>

In Vitro Belumosudil (SLx-2119; 40 µM) induces significant down-regulations of Tsp-1 and CTGF mRNA levels in PASMC. The microarray hybridized with aRNA from HMVEC treated with Belumosudil, shows a 5-times higher background than the other arrays\textsuperscript{[1]}. 

**Cat. No.:** HY-15307  
**CAS No.:** 911417-87-3  
**Molecular Formula:** \(\text{C}_{26}\text{H}_{24}\text{N}_{6}\text{O}_{2}\)  
**Molecular Weight:** 452.51  
**Target:** ROCK  
**Pathway:** Cell Cycle/DNA Damage; Cytoskeleton; Stem Cell/Wnt; TGF-beta/Smad

**Storage:**  
- Powder: -20°C 3 years, 4°C 2 years  
- In solvent: -80°C 1 year, -20°C 6 months
In Vivo

Belumosudil (KD-025; 100, 200 or 300 mg/kg, i.p.) dose-dependently reduces infarct volume after transient middle cerebral artery occlusion. Belumosudil is at least as efficacious in aged, diabetic or female mice, as in normal adult males\(^2\).

<table>
<thead>
<tr>
<th>PROTOCOL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cell Assay(^1)</strong></td>
</tr>
<tr>
<td><strong>Animal Administration(^2)</strong></td>
</tr>
</tbody>
</table>

**CUSTOMER VALIDATION**

- Int Immunopharmacol. 2023 Mar 15;118:110017.

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

**REFERENCES**
