Product data sheet

MedKoo Cat#: 584817
Name: Runcaciguat
CAS#: 1402936-61-1
Chemical Formula: C_{23}H_{22}Cl_{2}F_{3}NO_{3}
Exact Mass: 487.0929
Molecular Weight: 488.33

Product supplied as: Powder
Purity (by HPLC): ≥ 98%
Shipping conditions: Ambient temperature
Storage conditions: Powder: -20°C 3 years; 4°C 2 years.
In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:
Runcaciguat, also known as BAY 1101042, is a novel, potent, and orally active sGC activator. Runcaciguat activated the sGC reporter cell line with an EC50 value of 11.2 ± 1.0 nM. Pretreatment of the sGC reporter cell line with 30 μM ODQ for 3 h resulted in an increased potency of runcaciguat (EC50 of 2.1 ± 0.07 nM), and treatment of the reporter cells with runcaciguat in combination with the NO donor S-nitroso-N-acetylpenicillamine (SNAP) (10 and 100 nM) showed additive effects. Treatment with runcaciguat resulted in maximal luminescence signals in the range of 50–60% in comparison to the sGC activator cinaciguat. Given the broad impact of oxidative stress in cardiovascular and cardiorenal diseases, runcaciguat might become a new treatment modality for a broad variety of diseases in this indication space but also beyond.

2. CoA, QC data, SDS, and handling instruction
SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Max Conc. mg/mL</th>
<th>Max Conc. mM</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMSO</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Stock solution preparation table:

<table>
<thead>
<tr>
<th>Concentration / Solvent Volume / Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>2.05 mL</td>
<td>10.24 mL</td>
<td>20.48 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.41 mL</td>
<td>2.05 mL</td>
<td>4.10 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.20 mL</td>
<td>1.02 mL</td>
<td>2.05 mL</td>
</tr>
<tr>
<td>50 mM</td>
<td>0.04 mL</td>
<td>0.20 mL</td>
<td>0.41 mL</td>
</tr>
</tbody>
</table>

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator
Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study
In vitro study

In vivo study
TBD

7. Bioactivity
Biological target:
A novel, potent, and orally active sGC activator.
Product data sheet

In vitro activity

The investigation of the structure-activity relationship allowed to improve potency and multiple solubility, permeability, metabolism, and drug-drug interactions parameters. This program resulted in the discovery of the oral sGC activator runcaciguat (compound 45, BAY 1101042). Runcaciguat is currently investigated in clinical phase 2 studies for the treatment of patients with chronic kidney disease and nonproliferative diabetic retinopathy.


In vivo activity

TBD

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.