1. **Product description:**
Ligustilide is a major component of Angelica sinensis and is reported to have anti-inflammatory and neuroprotective effect.

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>100.0</td>
<td>525.65</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>5.26 mL</td>
<td>26.28 mL</td>
<td>52.57 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>1.05 mL</td>
<td>5.26 mL</td>
<td>10.51 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.53 mL</td>
<td>2.63 mL</td>
<td>5.26 mL</td>
</tr>
<tr>
<td>50 mM</td>
<td>0.11 mL</td>
<td>0.53 mL</td>
<td>1.05 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**

7. Bioactivity

Biological target:
Ligustilide is a bioactive phthalide derivative isolated from Angelica sinensis and Chuanxiong. Ligustilide exhibits neuroprotective, anti-cancer, anti-inflammatory, and vasodilator effects.

In vitro activity
In the investigation, ligustilide had a selective pro-apoptotic effect on prostate-CAFs. After ligustilide treatment, the proportion of CAFs in the G2-M phase of the cell cycle increased, and the expression of apoptosis-related proteins (p-P53, Bcl-2, Caspase9 and Cytochrome C) changed. Ligustilide blocks the CAF cell cycle and induces the apoptosis of CAFs.


In vivo activity
This study found that ligustilide (Lig), a novel Smad3 covalent inhibitor, effectively inhibited airway remodeling in cigarette smoke (CS) combined with lipopolysaccharide (LPS)-induced COPD mice. These findings provide experimental support that Lig attenuates COPD by repressing airway remodeling which is attributed to its suppression on the activation of EMT process in the airway epithelium via targeting Smad3 and inhibiting the recruitment of the Smad3-SARA heterodimer in the TGF-β1/Smad3 pathway.


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.