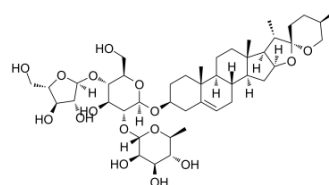


## Polyphyllin I

<b>Cat. No.:</b>	HY-N0047												
<b>CAS No.:</b>	50773-41-6												
<b>Molecular Formula:</b>	C <sub>44</sub> H <sub>70</sub> O <sub>16</sub>												
<b>Molecular Weight:</b>	855.02												
<b>Target:</b>	JNK; mTOR; Akt; PDK-1; Autophagy; Apoptosis												
<b>Pathway:</b>	MAPK/ERK Pathway; PI3K/Akt/mTOR; Autophagy; Apoptosis												
<b>Storage:</b>	<table border="0"> <tr> <td>Powder</td> <td>-20°C</td> <td>3 years</td> </tr> <tr> <td></td> <td>4°C</td> <td>2 years</td> </tr> <tr> <td>In solvent</td> <td>-80°C</td> <td>6 months</td> </tr> <tr> <td></td> <td>-20°C</td> <td>1 month</td> </tr> </table>	Powder	-20°C	3 years		4°C	2 years	In solvent	-80°C	6 months		-20°C	1 month
Powder	-20°C	3 years											
	4°C	2 years											
In solvent	-80°C	6 months											
	-20°C	1 month											



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 100 mg/mL (116.96 mM; Need ultrasonic)			
		Solvent Concentration	Mass	
			1 mg	5 mg
			10 mg	
<b>Preparing Stock Solutions</b>	<b>1 mM</b>	1.1696 mL	5.8478 mL	11.6956 mL
	<b>5 mM</b>	0.2339 mL	1.1696 mL	2.3391 mL
	<b>10 mM</b>	0.1170 mL	0.5848 mL	1.1696 mL
Please refer to the solubility information to select the appropriate solvent.				
<b>In Vivo</b>	<ol style="list-style-type: none"> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: ≥ 0.83 mg/mL (0.97 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 0.83 mg/mL (0.97 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 0.83 mg/mL (0.97 mM); Clear solution</li> </ol>			

### BIOLOGICAL ACTIVITY

<b>Description</b>	Polyphyllin I is a bioactive constituent extracted from Paris polyphylla, has strong anti-tumor activity. Polyphyllin I is an activator of the JNK signaling pathway and is an inhibitor of PDK1/Akt/mTOR signaling. Polyphyllin I induces autophagy, G2/M phase arrest and apoptosis <sup>[1][2][3]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	JNK signaling <sup>[2]</sup> PDK1/Akt/mTOR signaling <sup>[3]</sup>

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## CUSTOMER VALIDATION

- FASEB J. 2020 Oct 18.

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

## REFERENCES

- [1]. Kong M, et al. Effects of polyphyllin I on growth inhibition of human non-small lung cancer cells and in xenograft. *Acta Biochim Biophys Sin (Shanghai)*. 2010 Nov;42(11):827-33.
- [2]. Liu J, et al. Polyphyllin I induces G2/M phase arrest and apoptosis in U251 human glioma cells via mitochondrial dysfunction and the JNK signaling pathway. *Acta Biochim Biophys Sin (Shanghai)*. 2017 Jun 1;49(6):479-486.
- [3]. He J, et al. Polyphyllin I induces autophagy and cell cycle arrest via inhibiting PDK1/Akt/mTOR signal and downregulating cyclin B1 in human gastric carcinoma HGC-27 cells. *Biomed Pharmacother*. 2019 Sep;117:109189.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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