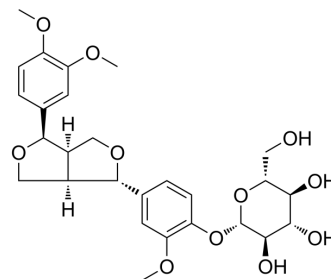


## Phillyrin

|                           |   |       |         |
|---------------------------|---|-------|---------|
| <b>Cat. No.:</b>          | HY-N0482  |       |         |
| <b>CAS No.:</b>           | 487-41-2  |       |         |
| <b>Molecular Formula:</b> | C <sub>27</sub> H <sub>34</sub> O <sub>11</sub> |       |         |
| <b>Molecular Weight:</b>  | 534.55  |       |         |
| <b>Target:</b>            | Cytochrome P450; Influenza Virus; Bacterial     |       |         |
| <b>Pathway:</b>           | Metabolic Enzyme/Protease; Anti-infection       |       |         |
| <b>Storage:</b>           | Powder  | -20°C | 3 years |
|                           |   | 4°C   | 2 years |
|                           | In solvent                                      | -80°C | 2 years |
|                           |   | -20°C | 1 year  |



### SOLVENT & SOLUBILITY

|   |   |                          |           |           |           |            |
|---|---|--------------------------|-----------|-----------|-----------|------------|
| <b>In Vitro</b>   | DMSO : 250 mg/mL (467.68 mM; Need ultrasonic)   |                          |           |           |           |            |
|   |   | Solvent<br>Concentration | Mass      | 1 mg      | 5 mg      | 10 mg      |
|   | <b>Preparing Stock Solutions</b>  | 1 mM                     |           | 1.8707 mL | 9.3537 mL | 18.7073 mL |
|   |   | 5 mM                     |           | 0.3741 mL | 1.8707 mL | 3.7415 mL  |
| 10 mM   |   |                          | 0.1871 mL | 0.9354 mL | 1.8707 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<br/>Solubility: ≥ 2.17 mg/mL (4.06 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline)<br/>Solubility: ≥ 2.17 mg/mL (4.06 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil<br/>Solubility: ≥ 2.17 mg/mL (4.06 mM); Clear solution</li> </ol> |                          |           |           |           |            |

### BIOLOGICAL ACTIVITY

|                                     |  |      |
|-------------------------------------|--|------|
| <b>Description</b>                  | Phillyrin is isolated from <i>Forsythia suspensa</i> Vahl (Oleaceae), has antibacterial and anti-inflammatory activities. Phillyrin has potential inductive effects on rat CYP1A2 and CYP2D1 activities, without affecting CYP2C11 and CYP3A1/2 activities <sup>[1]</sup> . Phillyrin has anti-influenza A virus activities <sup>[2]</sup> . |      |
| <b>IC<sub>50</sub> &amp; Target</b> | CYP1   | CYP2 |
| <b>In Vitro</b>                     | Phillyrin (1–5 μM; pretreatment 1 hour; 24 hours) inhibits high glucose-induced FAS protein significantly in HepG2 cells <sup>[1]</sup> .  |      |

Phillyrin (1–5  $\mu\text{M}$ ; pretreatment 1 hour; 24 hours) inhibits high glucose-induced FAS mRNA expression by suppressing SREBP-1c activation in human HepG2 hepatocytes<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

RT-PCR<sup>[1]</sup>

|                  |   |
|------------------|---|
| Cell Line:       | Human HepG2 hepatocyte cells                          |
| Concentration:   | 1 $\mu\text{M}$ ; 2.5 $\mu\text{M}$ ; 5 $\mu\text{M}$ |
| Incubation Time: | 24 hours  |
| Result:          | Reduced FAS and SREBP-1c mRNA expression.             |

## CUSTOMER VALIDATION

- Front Cell Dev Biol. 2021 Nov 10;9:763864.
- J Orthop Surg Res. 2024 May 22;19(1):308.

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## REFERENCES

[1]. Cheng Y, et al. Effects of phillyrin and forsythoside A on rat cytochrome P450 activities in vivo and in vitro. *Xenobiotica*. 2017 Apr;47(4):297-303.

[2]. Do MT, et al. Phillyrin attenuates high glucose-induced lipid accumulation in human HepG2 hepatocytes through the activation of LKB1/AMP-activated protein kinase-dependent signalling. *Food Chem*. 2013 Jan 15;136(2):415-25.

[3]. Qu XY, et al. Protective effects of phillyrin against influenza A virus in vivo. *Arch Pharm Res*. 2016 Jul;39(7):998-1005.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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