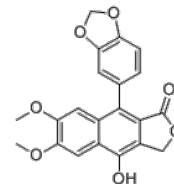


**Product Name** : Diphyllin  
**Cat. No.** : PC-63544  
**CAS No.** : 22055-22-7  
**Molecular Formula** : C<sub>21</sub>H<sub>16</sub>O<sub>7</sub>  
**Molecular Weight** : 380.352  
**Target** : Proton Pump  
**Solubility** : 10 mM in DMSO



## Biological Activity

Diphyllin is a naturally potent vacuolar ATPase (**v-ATPase**) inhibitor with IC<sub>50</sub> of 17 nM, potently inhibits the acid influx with IC<sub>50</sub> of 0.6 nM.

Diphyllin dose-dependently inhibits lysosomal acidification in human osteoclasts, inhibits human osteoclastic bone resorption (IC<sub>50</sub>=14 nM), calcium release, and pit area, despite increasing TRACP activity, numbers of osteoclasts, and cell viability.

Diphyllin also inhibits the proliferation and induce the apoptosis of human gastric cancer cells.

Diphyllin shows potential antiviral for various influenza virus strains using cell-based assays, through the inhibition of endosomal acidification, thus interfering with downstream virus replication.

## References

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Shen W, et al. *Eur J Pharmacol.* 2011 Sep 30;667(1-3):330-8.

Chen HW, et al. *Antiviral Res.* 2013 Sep;99(3):371-82.

**Caution: Product has not been fully validated for medical applications. Lab Use Only!**

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