(Z)-Ligustilide

Cat. No.: HY-N0401A

CAS No.: 81944-09-4

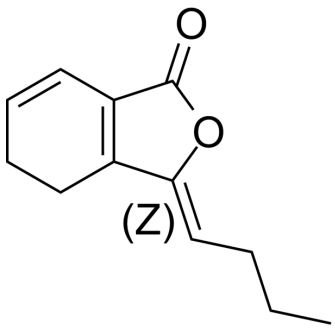
Molecular Formula: $C_{12}H_{14}O_2$

Molecular Weight: 190.24

Target: Bacterial

Pathway: Anti-infection

Storage: -20°C, protect from light, stored under nitrogen
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (525.65 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	5.2565 mL	26.2826 mL	52.5652 mL
	5 mM	1.0513 mL	5.2565 mL	10.5130 mL
	10 mM	0.5257 mL	2.6283 mL	5.2565 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (13.14 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (13.14 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (13.14 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

(Z)-Ligustilide is extracted from Ligusticum chuanxiong Hort, has antimicrobial and antifungal activity, exhibits an average antifungal score of 5.6[1]. (Z)-Ligustilide inhibits the expression of FATP5 and DGAT, inhibits fatty acid uptake and esterification in mice and has potential as therapeutics for nonalcoholic fatty liver disease (NAFLD) [2]. (Z)-Ligustilide is also able to reactivate ERα, has epigenetic regulation, and is used in the study of tamoxifen-resistant breast cancer[3].

CUSTOMER VALIDATION

- Eur J Inflamm. 2020 Jun.
- Preprints. 2023 JUl 25.

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REFERENCES

[1]. Lee W, et al. Z-ligustilide and n-Butylidenephthalide Isolated from the Aerial Parts of Angelica tenuissima Inhibit Lipid Accumulation In Vitro and In Vivo. Planta Med. 2019 Jul;85(9-10):719-728.

[2]. Rodrigues AMS, et al. The antifungal potential of (Z)-ligustilide and the protective effect of eugenol demonstrated by a chemometric approach. Sci Rep. 2019 Jun 19;9(1):8729. doi: 10.1038/s41598-019-45222-y

[3]. Ma H, et al. Z-ligustilide restores tamoxifen sensitivity of ERa negative breast cancer cells by reversing MTA1/IFI16/HDACs complex mediated epigenetic repression of ERa. Oncotarget. 2017 Apr 25;8(17):29328-29345.

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