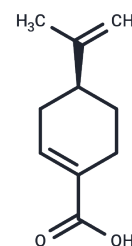


(S)-(-)-Perillic acid

Chemical Properties

| | |
|-------------------|---|
| CAS No. : | 23635-14-5 |
| Formula: | C10H14O2 |
| Molecular Weight: | 166.22 |
| Storage: | Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA. |



Biological Description

| | |
|---------------|---|
| Description | (S)-(-)-Perillic acid is a terpenoid natural product capable of inhibiting protein pentosylation and protein acylation. It exhibits anti-infective and anti-cancer activity, inducing cell cycle arrest and apoptosis in non-small cell lung cancer cells while increasing intracellular protein levels of Bax, p21, and caspase-3. |
| Targets(IC50) | Apoptosis, Cell Cycle Arrest, Antibacterial |
| In vitro | (S)-(-)-Perillic acid (1.0-3.5 mM) exhibited time- and dose-dependent inhibition of arterial smooth muscle cell (SMC) growth at 24, 48, and 72 hours [1]. (S)-(-)-Perillic acid (0.5 mM, 24 hours) upregulated the protein expression levels of Bax, Bcl2, p21, and caspase-3 in H520 cells [2]. |

Solubility Information

| | |
|---------------------|--|
| Solubility | DMSO: 160 mg/mL (962.58 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble) |
| In vivo Formulation | 10% DMSO+40% PEG300+5% Tween-80+45% Saline: 5 mg/mL (30.08 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i> |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|-------|-----------|------------|------------|
| 1 mM | 6.0161 mL | 30.0806 mL | 60.1612 mL |
| 5 mM | 1.2032 mL | 6.0161 mL | 12.0322 mL |
| 10 mM | 0.6016 mL | 3.0081 mL | 6.0161 mL |
| 50 mM | 0.1203 mL | 0.6016 mL | 1.2032 mL |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

- Ferri N, et al. Effect of *S*(-) perillic acid on protein prenylation and arterial smooth muscle cell proliferation. *Biochem Pharmacol.* 2001 Dec 15;62(12):1637-45.
- Yeruva L, et al. Perillyl alcohol and perillic acid induced cell cycle arrest and apoptosis in non small cell lung cancer cells. *Cancer Lett.* 2007 Nov 18;257(2):216-26.
- Khandelia H, et al. Interaction of salicylate and a terpenoid plant extract with model membranes: reconciling experiments and simulations. *Biophys J.* 2010 Dec 15;99(12):3887-94.

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