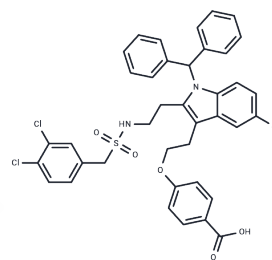


Ecopladib

Chemical Properties

| | |
|-------------------|---|
| CAS No. : | 381683-92-7 |
| Formula: | C ₃₉ H ₃₃ Cl ₃ N ₂ O ₅ S |
| Molecular Weight: | 748.11 |
| 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 | Ecopladib (PLA 725) is a sub-micromolar inhibitor of cytosolic phospholipase A ₂ α (cPLA ₂ α), with IC ₅₀ s of 0.15 μM and 0.11 μM in the GLU micelle and rat whole blood assays, respectively. |
| Targets(IC ₅₀) | Phospholipase |
| In vitro | Ecopladib is inactive against COX-1 and COX-2 at a concentration of 20 μM, significantly higher than its IC ₅₀ in MC-9 cells. It effectively inhibits 12- and 15-HETE production through the 12- and 15-lipoxygenase pathways, with IC ₅₀ values around 0.3 μM. Furthermore, Ecopladib shows a 73% inhibition of cPLA ₂ α at 37 nM in the PAPE liposome assay and a 16% inhibition of sPLA ₂ at 1 μM. It also suppresses the generation of prostaglandins (PGF ₂ α) and leukotrienes (LTB ₄ and LTC ₄ /D ₄ /E ₄), with IC ₅₀ values ranging between 20–30 nM, demonstrating its effectiveness across multiple pathways involved in inflammation and cell signaling. |
| In vivo | Ecopladib is orally efficacious at reducing carrageenan-induced paw swelling: from dose–response studies, it is determined that the ED ₅₀ is 40 mg/kg. Ecopladib is orally efficacious in this model and displays an ED ₅₀ of 8 mg/kg, demonstrating that it can inhibit COX-2 derived PGE ₂ formation in vivo[1]. |

Solubility Information

| | |
|------------|--|
| Solubility | DMSO: 7.49 mg/mL (10.01 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble) |
|------------|--|

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|-------|------------|------------|-------------|
| 1 mM | 1.3367 mL | 6.6835 mL | 13.367 mL |
| 5 mM | 0.2673 mL | 1.3367 mL | 2.6734 mL |
| 10 mM | 0.1337 mL | 0.6684 mL | 1.3367 mL |
| 50 mM | 0.0267 mL | 0.1337 mL | 0.2673 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

Lee KL, et al. Discovery of Ecopladib, an indole inhibitor of cytosolic phospholipase A2alpha. J Med Chem. 2007 Mar 22;50(6):1380-400. Epub 2007 Feb 17.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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