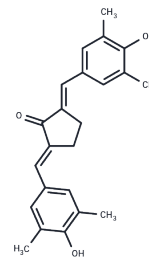


Pentagamavunon-1

Chemical Properties

| | |
|-------------------|---|
| CAS No. : | 27060-70-4 |
| Formula: | C ₂₃ H ₂₄ O ₃ |
| Molecular Weight: | 348.43 |
| 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 | Pentagamavunon-1 (PGV-1) is an oral Curcumin analog that effectively induces apoptosis through multiple molecular mechanisms. It primarily targets and inhibits key angiogenic factors, including cyclooxygenase-2 (COX-2) and vascular endothelial growth factor (VEGF), which play crucial roles in mediating cell proliferation and survival. Additionally, PGV-1 possesses the ability to inhibit the activation of NF-κB, further enhancing its apoptotic effects. [1] |
| Targets(IC50) | Apoptosis,Others,NF-κB,COX,VEGFR |
| In vitro | Pentagamavunon-1 (PGV-1) at concentrations ranging from 1 to 20 μM significantly enhances the cytotoxic effect of 5-fluorouracil (5-FU) on WiDr human colon carcinoma cells, as demonstrated through various incubation periods of 6, 12, 24, and 48 hours, thus suggesting a potentiated anti-cancer effect. Additionally, at lower concentrations (1, 2.5, 5, and 10 μM), PGV-1 distinctly influences cell cycle progression, leading to G2/M phase arrest after 24 hours of treatment. This indicates PGV-1's dual mechanism of action: enhancing 5-FU cytotoxicity and altering cell cycle dynamics. |
| In vivo | Pentagamavunon-1 (PGV-1, po, 20 mg/kg) exhibited significant anti-tumor effects in a Patient-Derived Xenograft (PDX) model without apparent toxicity. Administered orally at 20 mg/kg every two days for 20 days, PGV-1 inhibited tumor growth in a human cancer cell xenograft mouse model, showing negligible impact on body weight, white and red blood cell counts, behavior, and macroscopic appearance. |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|-------|------------|------------|-------------|
| 1 mM | 2.870 mL | 14.3501 mL | 28.7002 mL |
| 5 mM | 0.574 mL | 2.870 mL | 5.740 mL |
| 10 mM | 0.287 mL | 1.435 mL | 2.870 mL |
| 50 mM | 0.0574 mL | 0.287 mL | 0.574 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

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