Data Sheet (Cat.No.TN6673)

TargetMol
A DRUG SCREENING EXPERT

Cyclo(L-Phe-trans-4-hydroxy-L-Pro)

Chemical Properties

CAS No.:	118477-06-8
Formula:	C14H16N2O3
Molecular Weight:	N/A
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Cyclo(L-Phe-trans-4-hydroxy-L-Pro) is a natural product from Phellinus igniarius.
In vitro	We previously identified Streptomyces griseus as an anti-cancer agent (Kim et al., 2014). In this study, we isolated compounds from S. griseus and evaluated their anticancer effect and toxicity in vitro and in vivo. METHODS AND RESULTS: Preparative centrifugal partition chromatography (CPC) was used to obtain three compounds, cyclo(L-[4-hydroxyprolinyl]- L -leucine], Cyclo(L-Phe-trans-4-hydroxy-L-Pro) and phenethyl acetate (PA). We chose PA, which had the highest anticancer activity, as a target compound for further experiments. PA induced the formation of apoptotic bodies, DNA fragmentation, DNA accumulation in G0/G1 phase, and reactive oxygen species (ROS) formation. Furthermore, PA treatment increased Bax/Bcl-xL expression, activated caspase-3, and cleaved poly-ADP-ribose polymerase (PARP) in HL-60 cells. Simultaneous evaluation in vitro and in vivo, revealed that PA exhibited no toxicity in Vero cells and zebrafish embryos. CONCLUSIONS: We revealed, for the first time, that PA generates ROS, and that this ROS accumulation induced the Bcl signaling pathway.

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Evaluation on Anticancer Effect Against HL-60 Cells and Toxicity in vitro and in vivo of the Phenethyl Acetate Isolated from a Marine Bacterium Streptomyces griseus Fisheries & Aquatic Science, 2015 , 18 (1) :35-44.

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