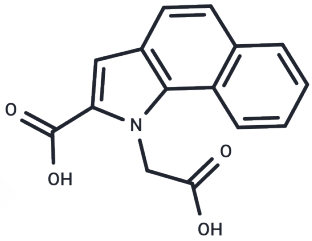
Data Sheet (Cat.No.T212600)

TargetMol

FPPS-IN-11

Chemical Properties



CAS No. : 1250273-31-4

Formula: C15H11NO4

Molecular Weight: 269.25

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	FPPS-IN-11 is a potent inhibitor of farnesyl pyrophosphate synthase (FPPS) that effectively blocks a key enzymatic step in the mevalonate pathway, thereby modulating downstream isoprenoid biosynthesis, protein prenylation processes, and cholesterol-associated signaling pathways that are critically involved in cell proliferation, immune regulation, and metabolic disease progression.
Targets(IC50)	Others
In vivo	In cancer models, such as breast cancer or multiple myeloma, FPPS-IN-11 reduces tumor burden through direct pro-apoptotic effects and by activating γδ T cells. The upstream accumulation of IPP acts as a potent antigen, stimulating the immune system to target tumor cells. Systemically, while its primary effects are focused on bone and cell survival, it may also lead to a secondary reduction in serum cholesterol levels [1][2].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.714 mL	18.5701 mL	37.1402 mL
5 mM	0.7428 mL	3.714 mL	7.428 mL
10 mM	0.3714 mL	1.857 mL	3.714 mL
50 mM	0.0743 mL	0.3714 mL	0.7428 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

Dunford J E, et al. Structure-activity relationships among the nitrogen containing bisphosphonates in clinical use and other analogues: time-dependent inhibition of human farnesyl pyrophosphate synthase[J]. Journal of medicinal chemistry, 2008, 51(7): 2187-2195.

Rogers M J, et al. Biochemical and molecular mechanisms of action of bisphosphonates[J]. Bone, 2011, 49(1): 34-41.