

Product Data Sheet

Product Name: AURKA-IN-4

Cat. No.: GC80919

Chemical Properties

Cas. No. 89575-11-1

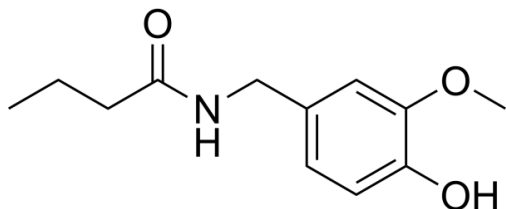
Formula $C_{12}H_{17}NO_3$ M.Wt 223.27

Solubility DMSO: 10 mg/mL (44.79 mM; Need ultrasonic) Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

AURKA-IN-4 is a Capsaicin -derived molecular glue targeting AURKA-PHB2, and acts as an inhibitor of Aurora kinase A (AURKA) and PHB2. AURKA-IN-4 binds to the active site of AURKA and the inhibitory pocket of PHB2, inhibits AURKA-dependent mitophagy, and increases mitochondrial mass in cancer cells overexpressing AURKA. AURKA-IN-4 can be used in the research of breast cancer [1].

In Vitro, AURKA-IN-4 (compound 13) (5-50 μ M; 6 h) significantly enhances and stabilizes the protein-

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protein proximity between AURKA and PHB2 in MCF7 breast cancer cells^[1]. AURKA-IN-4 (50 μ M; 6 h) does not alter the activation status of AURKA in centrosomes of MCF7 breast cancer cells^[1]. AURKA-IN-4 acts as a molecular glue to stabilize the AURKA/PHB2/LC3 ternary complex, and its binding affinity to AURKA (K_i =10.86 μ M) is higher than that to PHB2 (K_i =248.14 μ M)^[1]. AURKA-IN-4 (50 μ M; 24 h) specifically inhibits AURKA-dependent mitophagy in MCF7 and T47D breast cancer cells with overexpressed AURKA, increases mitochondrial mass, but exerts no effect on Hs578T cells with low endogenous AURKA levels^[1].

References:

[1]. Djehal A, et al. Development of capsaicin-derived prohibitin ligands to modulate the Aurora kinase A/PHB2 interaction and mitophagy in cancer cells. Communications biology. 2026 Jan 24;9(1):320.

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