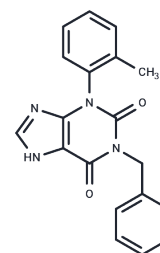


HSP90α-IN-1

Chemical Properties

CAS No. : 184897-90-3
 Formula: C₁₉H₁₆N₄O₂
 Molecular Weight: 332.356
 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	HSP90α-IN-1 is an HSP90α inhibitor (IC ₅₀ = 111 nM) that demonstrates anti-aging activity across various cellular senescence models. Belonging to the xanthine family, HSP90α-IN-1 is involved in research focused on combating age-related inflammation, senescence, and diseases (including cancer), and it may contribute to extending healthy lifespan.
Targets(IC ₅₀)	HSP, Interleukin
In vitro	HSP90α-IN-1 (Compound K5) displays the highest anti-aging activity in senescent PD15 and PD19 cell lines at 1 μM for 48 hours, while maintaining substantial safety in non-senescent cells. It inhibits HSP90α in a dose-dependent manner with an IC ₅₀ of 111 nM at concentrations ranging from 1 pM to 10 μM over 48 hours. At a concentration of 500 nM, HSP90α-IN-1 exhibits significant anti-aging effects on senescent IMR90 (PD22) (EC ₅₀ = 380 nM) and WI38 (PD51) (EC ₅₀ = 650 nM) cells with no significant toxicity when applied at 0.1-200 μM for 48 hours. Additionally, HSP90α-IN-1 induces apoptosis in senescent IMR90 cells (PD21) at 25 μM for 48 hours. In TAM-treated MCF7 cell lines, HSP90α-IN-1 (10 μM, 24-96 hours) reduces SA-β-galactosidase staining and increases the mortality rate of senescent cells, showing anti-aging effects with an EC ₅₀ of 24.4 μM while displaying low cytotoxicity towards proliferating cells (EC ₅₀ = 167.2 μM).
In vivo	HSP90α-IN-1 (Compound K5), administered via dietary supplementation with fresh food replacement three times weekly at concentrations of 10-100 μg/mL, extends the average lifespan of wild-type Canton-S fruit flies (n = 884) by 6.63%. Additionally, HSP90α-IN-1 at 10 μg/mL, delivered through intraperitoneal injection over three consecutive days, significantly reduces senescent cell burden in P16-3MR mice.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.0088 mL	15.0439 mL	30.0879 mL
5 mM	0.6018 mL	3.0088 mL	6.0176 mL
10 mM	0.3009 mL	1.5044 mL	3.0088 mL
50 mM	0.0602 mL	0.3009 mL	0.6018 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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