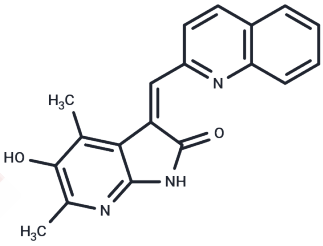
Data Sheet (Cat.No.T85667)

TargetMol

Anticancer agent 109

Chemical Properties



CAS No. : 2097497-16-8

Formula: C19H15N3O2

Molecular Weight: 317.34

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	Anticancer agent 109 (compound 6-15) acts as an inhibitor targeting the Gas6-Axl axis, demonstrating significant anti-cancer properties. This compound suppresses the expression of Gas6, Axl, p-PI3K, and p-AKT in cancer cells, thereby inducing G1 phase arrest and promoting apoptosis of cancer cells. Additionally, Anticancer agent 109 effectively inhibits tumor growth in nude mouse tumor-bearing models [1].
Targets(IC50)	TAM Receptor
In vitro	Anticancer Agent 109 (10 μM, 48 hours) inhibits Gas6 and Axl in A549 cells and suppresses Gas6-Axl axis related proteins in PANC-1 cells, induces G1 phase arrest, and promotes late apoptosis without altering DNA synthesis [1]. Cell viability assays [1] on cell lines including MCF-7, PANC-1, MDA-MB-231, HT-29, DU145, U937, and A549 with a concentration of 30 μM for 48 hours show inhibition of cancer cell growth with up to 20-fold less toxicity to normal cells and up to 5.4 times higher anticancer activity compared to Sunitinib. Growth inhibition IC50 values are 2.0 μM (MCF-7), 2.8 μM (MDA-MB-231), 4.6 μM (HT-29), 1.1 μM (DU145), 6.7 μM (U937), 4.2 μM (A549), and 4.0 μM (PANC-1). Apoptosis analysis [1] in PANC-1 at concentrations of 1 μM, 5 μM, and 10 μM for 48 hours increases sub-G1 fraction and induces late apoptosis. Western Blot analysis [1] at a concentration of 10 μM for 48 hours in A549 and PANC-1 cells demonstrates inhibition of Gas6 and Axl, increased Bax/Bcl-2 expression ratio, and suppression of p-PI3K and p-AKT in PANC-1 cells. RT-PCR [1] on PANC-1 at concentrations of 3 μM, 5 μM, and 10 μM for 48 hours also confirms inhibition of Gas6 and Axl.
In vivo	Anticancer agent 109, when administered at 3 mg/kg via intraperitoneal injection (i.p.) six times a week, significantly reduced the size and weight of tumors in xenograft models using BALB/c-nu mice, particularly in A549 tumors over 31 days and PANC-1 tumors over 85 days [1]. The dosage of 1 mg/kg resulted in approximately 75% tumor reduction in A549 models, while 3 mg/kg achieved similar outcomes in PANC-1 models, although tumors were not completely eradicated in the A549 models.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.1512 mL	15.756 mL	31.5119 mL
5 mM	0.6302 mL	3.1512 mL	6.3024 mL
10 mM	0.3151 mL	1.5756 mL	3.1512 mL
50 mM	0.063 mL	0.3151 mL	0.6302 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.