Data Sheet (Cat.No.T213013)

TargetMol

TQFL13

Chemical Properties

CAS No. : 2822560-46-1

Formula: C20H23NO5

Molecular Weight: 357.41

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	TQFL13 is a derivative of Thymoquinone (TQ) with notable anti-breast cancer activity. It exhibits higher cytotoxicity against breast cancer cells (BT549, MDA-MB-231, 4T1), induces apoptosis, and arrests the cell cycle at the S and G2/G1 phases. TQFL13 demonstrates dose-dependent antitumor activity in murine breast cancer xenograft models and is useful for breast cancer research.
Targets(IC50)	Apoptosis
In vitro	TQFL13 exhibits cytotoxicity against BT549, MDA-MB-231, and 4T1 breast cancer cells with low toxicity to normal MCF-10A cells. At concentrations of 0-160 μM over 24 hours, the IC50 values are 23.80 μM, 37.55 μM, 17.59 μM, and >100 μM respectively; at 48 hours, the IC50 values alter to 12.35 μM, 12.14 μM, 12.21 μM, and >100 μM. At concentrations of 0-20 μM for 24 hours, TQFL13 induces apoptosis in 4T1 cells and causes cell cycle arrest in BT549 and MDA-MB-231 cells at the S phase and G2/G1 phase. Additionally, TQFL13, at 2.5-5 μM for up to 54 hours, inhibits the growth, migration, and
In vivo	TQFL13 (3.75-15 mg/kg, intraperitoneal injection, from the 4th day after 4T1 cell implantation in the mammary fat pad until the 30th day) exhibits antitumor activity in a BALB/c mouse xenograft model of breast cancer.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7979 mL	13.9895 mL	27.9791 mL
5 mM	0.5596 mL	2.7979 mL	5.5958 mL
10 mM	0.2798 mL	1.399 mL	2.7979 mL
50 mM	0.056 mL	0.2798 mL	0.5596 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.

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