Data Sheet (Cat.No.T61732)

TargetMol

EGFR/HER2-IN-6

Chemical Properties

CAS No. :

Formula: C18H21N5O3S

Molecular Weight: 387.46

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	EGFR/HER2-IN-6 (compound 43) is a dual EGFR/HER2 and DHFR inhibitor with potent activity against EGFR kinase, HER2 kinase, and DHFR, characterized by IC50 values of 0.122 μM, 0.078 μM, and 0.585 μM, respectively. This compound displays notable anticancer properties in various cancer cell lines, while demonstrating a favorable safety profile and selectivity indices. Consequently, EGFR/HER2-IN-6 holds promise as a valuable tool in cancer research [1].
Targets(IC50)	Apoptosis,EGFR,Others
In vitro	EGFR/HER2-IN-6 demonstrates a notable broad-spectrum cytotoxicity across various cell lines, including HepG2 hepatocellular carcinoma, MCF7 breast cancer, HCT-116 colorectal carcinoma, PC-3 prostate, and HeLa cervical epithelioid carcinoma, as well as lower toxicity toward WI-38 normal fetal lung fibroblasts. Particularly against MCF7 cells, its cytotoxic effects are superior to those of SOR, with IC50 values ranging from 2.37 to 18.39 μM for cancer cells and 36.84 μM for normal cells after 72 hours exposure to concentrations up to 100 μM. Additionally, at lower concentrations (0-20 μM) and shorter exposure times (0-48 hours), EGFR/HER2-IN-6 disrupts the cell cycle and triggers apoptosis, specifically in MCF-7 breast cancer cells, favoring anti-cancer activity through mechanisms that include cell cycle arrest at the G1/S and G1 phases rather than inducing necrosis.
In vivo	EGFR/HER2-IN-6, administered intraperitoneally at a dosage of 10 mg/kg once daily for 20 days, exhibits significant anti-breast cancer activity in 8-week-old Swiss albino female mice. The treatment resulted in a 65.3% decrease in tumor volume and a 7.4% reduction in body weight after 20 days, demonstrating its potential efficacy in combating breast cancer (1).

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5809 mL	12.9046 mL	25.8091 mL
5 mM	0.5162 mL	2.5809 mL	5.1618 mL
10 mM	0.2581 mL	1.2905 mL	2.5809 mL
50 mM	0.0516 mL	0.2581 mL	0.5162 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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