Data Sheet (Cat.No.T213078)

TargetMol

AGW-11

Chemical Properties

CAS No. :

Formula:

Molecular Weight:

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	AGW-11 is a potent dual inhibitor that targets EGFR (IC50 = 556 nM) and VEGFR2 (IC50 = 289.7 nM). It induces apoptosis and inhibits the phosphorylation of EGFR, VEGFR2, and ERK1/2 in HUVECs. AGW-11 effectively suppresses cancer cell growth, reduces HUVEC proliferation, tube formation, and invasion, thus blocking angiogenesis. In 4T1 xenograft mouse models, AGW-11 significantly inhibits tumor growth and reduces lung metastasis. AGW-11 is applicable in breast cancer research.
Targets(IC50)	Apoptosis,ERK,EGFR,VEGFR
In vitro	AGW-11 exhibits significant antiproliferative activity in cancer cells including MDA-MB-231, 4T1, A2780, and HCT-116 with IC_{50} values of 1.26 μM, 2.85 μM, 0.75 μM, and 1.58 μM respectively, when administered at concentrations of 0.5-30 μM for 48 hours. In MDA-MB-231 cells, AGW-11 (0.5-2 μM, 24 h) significantly inhibits the phosphorylation of EGFR and ERK1/2 in a concentration-dependent manner. The compound at 2 μM for 24 hours potently suppresses colony formation and induces apoptosis in 4T1 breast cancer cells. Moreover, AGW-11 (1-4 μM, 6-24 h) strongly inhibits tube formation and exhibits a concentration-dependent reduction of invasion in HUVECs. Furthermore, AGW-11 (1-4 μM, 24 h) effectively decreases phosphorylation of VEGFR2 and ERK1/2 in a concentration-dependent manner in HUVECs.
In vivo	AGW-11, administered intraperitoneally at doses of 1-5 mg/kg every other day for a period of 20 days, demonstrated significant antitumor activity in the 4T1 breast cancer xenograft model using BALB/c mice.

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