

FGFR1/VEGFR2-IN-2

Chemical Properties

CAS No. :

Formula: C₂₁H₁₅ClF₃N₄O₄S

Molecular Weight: 469.86

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 | FGFR1/VEGFR2-IN-2 (compound 6) is a dual inhibitor targeting both VEGFR2 and FGFR1 with IC ₅₀ values of 0.025 μM and 0.026 μM, respectively. This compound also exhibits inhibitory effects on EGFR and PDGFR-β, with IC ₅₀ values of 0.106 μM and 0.077 μM, respectively. FGFR1/VEGFR2-IN-2 demonstrates significant anticancer activity in the NCI-60 cell lines, showing a growth inhibition (GI) of 60.38%. In T-47D cell lines, it achieves an IC ₅₀ of 8.51 μM, exhibits anti-migratory properties, induces cell cycle arrest in the G1 phase, and promotes both apoptosis and necrosis. Additionally, while it has an IC ₅₀ greater than 100 μM in MCF-7 cell lines, it does so with an IC ₅₀ of 69.17 μM in MDA-MB-231 cell lines and shows no toxicity to normal cells. |
| Targets(IC ₅₀) | Apoptosis,FGFR,Necroptosis,PDGFR,VEGFR |
| In vitro | FGFR1/VEGFR2-IN-2 exhibits anti-tumor proliferative activity with an average GI of 60.38% at a concentration of (10 μM). This compound demonstrates significant cytotoxicity in breast cancer cell lines T-47D, MCF-7, and MDA-MB-231 but does not affect the normal Vero cells. At concentrations of (10, 20 μM), FGFR1/VEGFR2-IN-2 induces cell cycle arrest in the G1 phase in T-47D cells. Additionally, at (2.12, 4.25 μM), it promotes early and late apoptosis in T-47D cells, as well as necrosis. Furthermore, at (3.7-4.8 μM), it augments necrosis while increasing the expression of BAX and Caspase-3, and reducing BCL-2 expression. Importantly, at (6 μM; 24, 48 h), it possesses anti-migratory effects in T-47D cells. |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|-------|------------|------------|-------------|
| 1 mM | 2.1283 mL | 10.6415 mL | 21.2829 mL |
| 5 mM | 0.4257 mL | 2.1283 mL | 4.2566 mL |
| 10 mM | 0.2128 mL | 1.0641 mL | 2.1283 mL |
| 50 mM | 0.0426 mL | 0.2128 mL | 0.4257 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

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