EGFR kinase inhibitor 5

Cat. No.: HY-162482

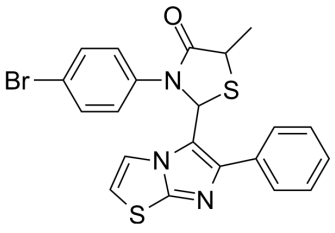
Molecular Formula: $C_{21}H_{16}BrN_3OS_2$

Molecular Weight: 470.41

Target: EGFR; Apoptosis

Pathway: JAK/STAT Signaling; Protein Tyrosine Kinase/RTK; Apoptosis

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

EGFR kinase inhibitor 5 (Compound 4c) is an orally active inhibitor for epidermal growth factor receptor (EGFR) kinase, with IC_{50} of 18.35 μM. EGFR kinase inhibitor 5 induces apoptosis. EGFR kinase inhibitor 5 exhibits anticancer and anti-inflammatory activity with low toxicity (LD_{50} range: 500-2000 mg/kg)[1].

IC_{50} & Target

IC_{50}: 18.35 μM (EGFR Kinase)

In Vitro

EGFR kinase inhibitor 5 (0-80 μM, 72 h) inhibits migration of cancer cell A549, and exhibits anticancer activity against cancer cell A549, MCF7 and HCT116, with IC_{50}s of 10.74, 18.73 and 23.22 μM, respectively[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Migration Assay [1]

Cell Line:	A549
Concentration:	0-30 μM
Incubation Time:	24 h
Result:	Inhibited cell migration.

In Vivo

EGFR kinase inhibitor 5 (14.77 mg/kg, p.o., 15 days) exhibits anti-inflammatory efficacy in carrageenan induced rat paw edema model, with low ulcerogenic potential and lipid peroxidation[1].

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Animal Model:	Carrageenan-induced hind paw edema in Wistar rats model[1]
Dosage:	0.0314 mmol/kg
Administration:	p.o., 15 days
Result:	Inhibited 80.17% paw edema.

REFERENCES

[1]. Kamboj P, et al., Design, synthesis, biological assessment and molecular modeling studies of novel imidazothiazole-thiazolidinone hybrids as potential anticancer and anti-inflammatory agents. Sci Rep. 2024 Apr 11;14(1):8457.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA