KRASG12C IN-1

Cat. No.: HY-151999

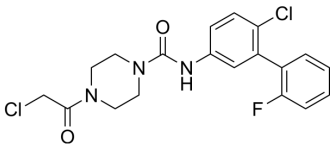
Molecular Formula: $C_{19}H_{18}Cl_2FN_3O_2$

Molecular Weight: 410.27

Target: Ras

Pathway: GPCR/G Protein

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



BIOLOGICAL ACTIVITY

Description

KRASG12C IN-1 is a potent and covalent $KRAS^{G12C}$ inhibitor that traps $KRAS^{G12C}$ in the GDP-bound state. KRASG12C IN-1 exhibits potent antitumor activity against KRAS-mutant non-small cell lung cancer[1].

In Vitro

KRASG12C IN-1 (compound 20a) (72 h) shows potent and selective antiproliferative activities against $KRAS^{G12C}$ NSCLC cells, with IC_{50}s of 0.5 μM against NCI-H358 cells and 1.30 μM against NCI-H23 cells, with 7- to 21-fold selectivity over $KRAS^{G12S}$ and $KRAS^{WT}$ cells[1].

KRASG12C IN-1 (0.5-8.0 μM; 6 h) decreases the phosphorylation of ERK and AKT in $KRAS^{G12C}$-mutant NCIH358 cells[1].

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

Western Blot Analysis[1]

Cell Line:	NCI-H358 and NCI-H2228 cells
Concentration:	0.5, 1.0, 2.0, 4.0, 8.0 μM
Incubation Time:	6 hours
Result:	Showed no impact on KRAS signaling in $KRAS^{WT}$ NCI-H2228 cells. The pERK level decreased 40%-90%, and the pAKT level was down-regulated by 30%-90% in NCI-H358 cells.

In Vivo

KRASG12C IN-1 (compound 20a) (10-15 mg/kg; i.p. every 2 d for 21 d) inhibited tumor growth in H358 xenografts by suppressing $KRAS^{G12C}$ signalling[1].

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

Animal Model:	Female BALB/c Nude mice were injected subcutaneously with NCI-H358 cells[1]
Dosage:	10, 15 mg/kg
Administration:	I.p. every two days for 21 days
Result:	Significantly inhibited tumor growth while the body weight of mice was not influenced.

REFERENCES

[1]. Cheng R, et, al. Design, synthesis, and evaluation of 4(1H)-quinolinone and urea derivatives as KRASG12C inhibitors with potent antitumor activity against KRAS-mutant non-small cell lung cancer. Eur J Med Chem. 2022 Dec 15;244:114808.

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