Kobe2602

Cat. No.: HY-15717

CAS No.: 454453-49-7

Molecular Formula: $C_{14}H_9F_4N_5O_4S$

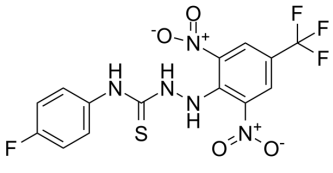
Molecular Weight: 419.31

Target: Ras

Pathway: GPCR/G Protein; MAPK/ERK Pathway

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 200 mg/mL (476.97 mM; Need ultrasonic)

H_2O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.3849 mL	11.9244 mL	23.8487 mL
5 mM	0.4770 mL	2.3849 mL	4.7697 mL
10 mM	0.2385 mL	1.1924 mL	2.3849 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 5 mg/mL (11.92 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 5 mg/mL (11.92 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Kobe2602 is a Ras-Raf interaction inhibitor. Kobe2602 inhibits the binding of H-Ras·GTP to c-Raf-1 RBD with a K_i of 149 μM. Kobe2602 has antitumor activity[1].

IC_{50} & Target

Ki: 149 μM (Ras-Raf interaction)[1]

In Vitro

Kobe2602 (2-20 μM; 1 hour) exhibits Ras-Raf-binding inhibition in NIH 3T3 cells[1].
Kobe2602 has IC_{50} value of approximately 10 μM for the cellular Ras-Raf-binding inhibition[1].
Kobe2602 (20 μM) efficiently inhibits the phosphorylation of MEK and ERK, downstream kinases of Raf in NIH 3T3 cells transiently expressing H-Ras^{G12V}[1].

Kobe2602 inhibits Ras•GTP but not Ras•GDP[1].
Kobe2602 (20 μM) inhibits the anchorage-dependent proliferation of H-Ras^{G12V}-transformed cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[1]

Cell Line:	H-ras^{G12V}-transformed NIH 3T3 cells
Concentration:	20 μM
Incubation Time:	24 hours , 48 hours, 72 hours
Result:	Efficiently inhibited colony formation in soft agar in a dose-dependent manner.

Western Blot Analysis[1]

Cell Line:	NIH 3T3 cells
Concentration:	2 μM, 20 μM
Incubation Time:	1 hour
Result:	Effectively reduced the amount of c-Raf-1 associated with H-Ras^{G12V} in NIH 3T3 cells in a dose-dependent manner, indicating the inhibition of the cellular activity of Ras.

In Vivo

Kobe2602 (80 mg/kg; p.o.; five consecutive days per week; for 17 days) exhibits antitumor activity on a xenograft of human colon carcinoma SW480 cells carrying the K-Ras^{G12V} gene[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female athymic nude mice (6-8 wk old), with SW480 cells xenograft[1]
Dosage:	80 mg/kg
Administration:	Oral administration, five consecutive days per week, for 17 days
Result:	Caused inhibition of the tumor growth.

REFERENCES

[1]. Shima, Fumi, et al. In silico discovery of small-molecule Ras inhibitors that display antitumor activity by blocking the Ras-effector interaction. Proceedings of the National Academy of Sciences of the United States of America (2013), 110(20), 8182-8187,

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