Anticancer agent 105

Cat. No.: HY-149949

CAS No.: 2450987-57-0

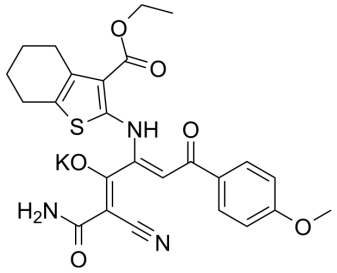
Molecular Formula: $C_{25}H_{24}KN_3O_6S$

Molecular Weight: 533.64

Target: Apoptosis

Pathway: Apoptosis

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



BIOLOGICAL ACTIVITY

Description

Anticancer agent 105 is a compound based on thienopyrimidine scaffold, with with good safety and anticancer properties. Anticancer agent 105 shows selective toxicity towards melanoma cancer, and induces apoptosis. And Anticancer agent 105 significantly inhibits the metastatic nodules, even in pulmonary metastatic melanoma mouse model[1].

In Vitro

Anticancer agent 105 (compound 9cb) shows selectivity against cancer cells, while it inhibits survival of cancerous cells (B16–F10 melanoma) and normal non-cancerous fibroblasts (MEF NF2) with IC_{50}s of 2.41 μM, and >100 μM, respectively[1]. Anticancer agent 105 (0.5-10 μM; 24 h) shows toxicity against cancer cells, and (5-20 μM; 48 h) induces apoptosis and necrosis in B16-F10 cells[1].

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

Cell Cytotoxicity Assay[1]

Cell Line:	B16-F10 melanoma
Concentration:	0.5 μM, 1 μM, 5 μM, and 10 μM
Incubation Time:	24 h
Result:	Exhibited very low toxicity or were non-toxic in the case of MEF NF2 cells in the range of concentration 0.2-55 μM.

Apoptosis Analysis[1]

Cell Line:	B16-F10 melanoma
Concentration:	5 μM, 10 μM, 15 μM, and 20 μM
Incubation Time:	48 h
Result:	Induced early apoptosis and resulted nuclear condensation.

In Vivo

Anticancer agent 105 (compound 9cb) (9-9.5 mg/kg every 3rd d for 22 d; ip) inhibits metastatic nodules in B16-F10 melanoma-bearing C57BL/6 mice[1].

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Animal Model:	Pulmonary metastatic melanoma mouse model[1]
Dosage:	I: 9-9.5 mg/kg; II: 42-4.6 mg/kg
Administration:	IP; once daily every 3rd d for 22 d
Result:	Decreased the number of metastatic nodules in mouse.

REFERENCES

[1]. Rogova A, et al. Synthesis of thieno[3,2-e]pyrrolo[1,2-a]pyrimidine derivatives and their precursors containing 2-aminothiophenes fragments as anticancer agents for therapy of pulmonary metastatic melanoma. Eur J Med Chem. 2023 Jun 5;254:115325.

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