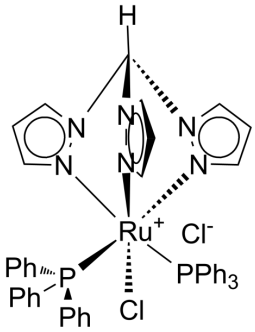
Antiproliferative agent-12

Cat. No.:	HY-150969
Molecular Formula:	$C_{46}H_{40}Cl_2N_6P_2Ru$
Molecular Weight:	910.79
Target:	Mitochondrial Metabolism
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Antiproliferative agent-10 (compound 1) is an anti-tumour ruthenium(II)-tris-pyrazolylmethane complex that inhibits the growth of cancer cells by inhibiting mitochondrial calcium uptake[1].

In Vitro

Antiproliferative agent-10 (compound 1) (1.5-5.8 μM, 72 h) has significantly anti-cancer cell proliferative activity and effectively induces apoptosis in HCT116 cells[1].

Antiproliferative agent-10 (15 μM, 24 h) shows HCT116 cell survival rates of 93% to 97% and ruthenium content of cell was 145.1 ng/10^6 cells, so that it can accumulate efficiently in the cells and promote their biological activity[1].

Antiproliferative agent-10 (3-10 μM, 5 h) can cause mitochondrial depolarization in a concentration-dependent manner and inhibit mitochondrial calcium uptake[1].

Antiproliferative agent-10 can inhibit the formation and growth of spheroids of HCT116 cells with an IC_{50} value of 2.5 μM, approximately 18-fold more effective than cisplatin and almost completely disintegrate of the spheroids[1].

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

Cell Proliferation Assay[1]

Cell Line:	MCF-7 (breast), HeLa (cervical), 518A2 (melanoma), HCT116 (colon), RD (rhabdomyosarcoma)
Concentration:	1.5-5.8 μM
Incubation Time:	72 hours
Result:	Inhibited the proliferation of MCF-7, HeLa, 518A2, HCT116 and RD with the IC_{50} values of 2.4, 4, 2.6, 1.5 and 2.2 μM, respectively.

REFERENCES

[1]. Jakub Cervinka, et al. Ruthenium(II)-Tris-pyrazolylmethane Complexes Inhibit Cancer Cell Growth by Disrupting Mitochondrial Calcium Homeostasis. J Med Chem. 2022 Aug 1.

Caution: Product has not been fully validated for medical applications. For research use only.

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