KS100

Cat. No.: HY-146682

CAS No.: 2408477-54-1

Molecular Formula: $C_{17}H_{14}Br_3N_3O_2S$

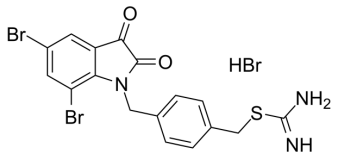
Molecular Weight: 564.09

Target: Aldehyde Dehydrogenase (ALDH); Apoptosis

Pathway: Metabolic Enzyme/Protease; Apoptosis

Storage: 4°C, sealed storage, away from moisture

* The compound is unstable in solutions, freshly prepared is recommended.



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (221.60 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.7728 mL	8.8638 mL	17.7277 mL
	5 mM	0.3546 mL	1.7728 mL	3.5455 mL
	10 mM	0.1773 mL	0.8864 mL	1.7728 mL

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

BIOLOGICAL ACTIVITY

Description

KS100 is a potent ALDH inhibitor with IC_{50}s of 230, 1542, 193 nM for ALDH1A1, ALDH2, and ALDH3A1, respectively. KS100 shows antiproliferative and anticancer effects with low low toxic. KS100 significantly increases ROS activity, lipid peroxidation and toxic aldehyde accumulation. KS10600 induces apoptosis and cell cycle arrest at the G2/M phase[1].

IC_{50} & Target

IC_{50}: 230 nM (ALDH1A1); 1542 nM (ALDH2); 193 nM (ALDH3A1)[1]

In Vitro

KS100 (compound 3j) (0-100 μM; 72 h) shows anti-proliferative activity with IC_{50}s of 3.7, 2.1, 2.9, 2.5, 0.3, 1.0, 1.2, 1.3, 2.1, 9.8 μM for UACC 903, 1205 Lu, HCT116, HT29, NCIH929, U266, RPMI8226, MM.1R, MM.1S, FF2441 cells, respectively[1].
KS100 (5 μM, 24 h) induces apoptosis and cell cycle arrest at the G2/M phase[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Apoptosis Analysis[1]

Cell Line:	HCT116, HT29 cells
Concentration:	5 μM
Incubation Time:	24 h

Result:	Induced cell apoptosis.

Apoptosis Analysis[1]

Cell Line:	HCT116 cells
Concentration:	5 μM
Incubation Time:	24 h
Result:	Induced cell cycle arrest at G2/M phase.

REFERENCES

[1]. Dinavahi SS, et al. Design, synthesis characterization and biological evaluation of novel multi-isoform ALDH inhibitors as potential anticancer agents. Eur J Med Chem. 2020 Feb 1;187:111962.

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