KS106

Cat. No.: HY-146683

CAS No.: 2408477-50-7

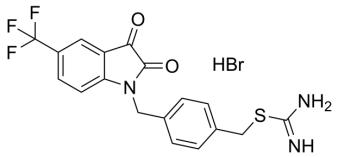
Molecular Formula: $C_{18}H_{15}BrF_3N_3O_2S$

Molecular Weight: 474.29

Target: Aldehyde Dehydrogenase (ALDH); Apoptosis

Pathway: Metabolic Enzyme/Protease; Apoptosis

Storage: 4°C, sealed storage, away from moisture and light
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (210.84 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.1084 mL	10.5421 mL	21.0841 mL
	5 mM	0.4217 mL	2.1084 mL	4.2168 mL
	10 mM	0.2108 mL	1.0542 mL	2.1084 mL

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

BIOLOGICAL ACTIVITY

Description

KS106 is a potent ALDH inhibitor with IC_{50}s of 334, 2137, 360 nM for ALDH1A1, ALDH2, and ALDH3A1, respectively. KS106 shows antiproliferative and anticancer effects with low low toxic.KS106 significantly increases ROS activity, lipid peroxidation and toxic aldehyde accumulation. KS106 induces apoptosis and cell cycle arrest at the G2/M phase[1].

IC_{50} & Target

ALDH2	ALDH1A1	ALDH3A1
2137 nM (IC_{50})	334 nM (IC_{50})	360 nM (IC_{50})

In Vitro

KS106 (compound 3h) (0-100 μM; 72 h) shows anti-proliferative activity with IC_{50}s of 5.7, 5.7, 5.7, 4.9, 1.5, 2.6, 1.6, 1.7, 2.2, 20.7 μM for UACC 903, 1205 Lu, HCT116, HT29, NCIH929, U266, RPMI8226, MM.1R, MM.1S, FF2441 cells, respectively[1].
KS106 (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.

Cell Cycle 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.

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