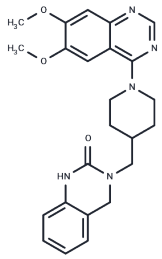
Data Sheet (Cat.No.T15639)

TargetMol

K-756

Chemical Properties



CAS No. : 130017-40-2

Formula: C24H27N5O3

Molecular Weight: 433.5

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	K-756 is a direct and selective inhibitor of tankyrase (TNKS), inhibiting the ADP-ribosylation activity of TNKS1 [IC50 = 31 nM] and TNKS2 [IC50 = 36 nM].
Targets(IC50)	PARP,Wnt/beta-catenin
In vitro	K-756 inhibits the cell growth of APC-mutant colorectal cancer COLO 320DM and SW403 cells by inhibiting the Wnt/β-catenin pathway. K-756 is a novel and selective Wnt/β-catenin pathway inhibitor targeting tankyrase (TNKS). TNKS is one of the members of the PARP family. K-756 binds to the induced pocket of TNKS and inhibits its enzyme activity. K-756 inhibits TNKS1 and TNKS2 by 97% and 100%, respectively. The inhibitory activity of K-756 against PARP1, PARP2, PARP3, PARP6, PARP7, and PARP11 is less than 13%. K-756 strongly inhibits the reporter activity in DLD-1/TCF-Luc cells (IC50: 110 nM) but does not inhibit DLD-1/mtTCF-Luc cells, even at 1,000 nM. APC-mutant colorectal cancer cell line COLO 320DM and SW403 cells are treated with K-756 and after 144 hours, cell growth inhibition is measured by an XTT assay. The application of K-756 inhibits the cell growth of COLO 320DM with a GI50 of 780 nM. K-756 also inhibits SW403 with a GI50 of 270 nM [1].
In vivo	Vehicle (0.5% MC400) or K-756 is given orally once daily for three consecutive days at doses of 100, 200, and 400 mg/kg. The inhibition of the Wnt/β-catenin pathway in tumors is assessed by measuring the levels of FGF20 and LGR5, as well as luciferase activity. Inhibition of the Wnt/β-catenin pathway is evident at a 400 mg/kg dose after just one day of administration. After three days of treatment, significant reductions in FGF20 expression and reporter activity are observed at doses of 100 mg/kg and higher, while LGR5 expression significantly decreases at doses of 200 mg/kg and higher. The greatest inhibitory effect is achieved with a three-day administration of K-756 at 400 mg/kg [1].

Solubility Information

Solubility	DMSO: 4.5 mg/mL (10.38 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3068 mL	11.534 mL	23.0681 mL
5 mM	0.4614 mL	2.3068 mL	4.6136 mL
10 mM	0.2307 mL	1.1534 mL	2.3068 mL
50 mM	0.0461 mL	0.2307 mL	0.4614 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Okada-Iwasaki R, et al. The Discovery and Characterization of K-756, a Novel Wnt/β-Catenin Pathway Inhibitor Targeting Tankyrase. Mol Cancer Ther. 2016 Jul;15(7):1525-34.