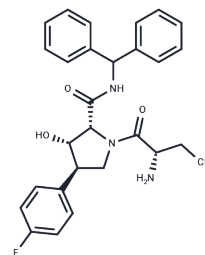


ASX-173

Chemical Properties

CAS No. : 2748800-08-8
 Formula: C₂₈H₃₀FN₃O₃
 Molecular Weight: 475.56
 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	ASX-173 is an orally active asparagine synthetase (ASNS) inhibitor with an IC ₅₀ of 0.113 μM and a K _i of 0.4 nM. It enhances the anticancer activity of L-Asparaginase (ASNase). When combined with ASNase, ASX-173 disrupts nucleotide synthesis and induces cell cycle arrest, apoptosis (apoptosis), and autophagy (autophagy) in leukemia cells. This combination also slows the growth of OCI-AML2 xenograft tumors. ASX-173 is applicable in research on acute lymphoblastic leukemia, acute myeloid leukemia, colorectal cancer, and other cancers.
Targets(IC50)	Apoptosis,Akt,Caspase,CDK,Autophagy,PARP,ATG
In vitro	ASX-173, within a concentration range of 0.1-1000 nM over 24 hours, inhibits the transcription of multiple endogenous Wnt target genes, including AXIN1, DKK1, CD133/PROM1, and MYC, in HCT-116 cells. It demonstrates potent cytotoxicity in MDA-MB-231, SW620, and A375 cells cultured in DMEM medium but shows minimal or no toxicity in RPMI-1640 medium. ASX-173, between 0-500 nM, can restore the sensitivity of ASNS-deficient RS4;11 cells to ASNase. Furthermore, concentrations of 0-1250 nM enhance ASNase's anticancer activity in ASNS-positive cancer cell lines such as OPM-2, MOLP-8, AMO-1, Jurkat, H929, MV4;11, and HT1080. ASX-173, at a range of 0-1500 nM, increases sensitivity to both ASNase WT and glutaminase-deficient ASNase variants (ASNase Q59L) in OVCAR-8, 92.1_D3, 92.1_M3, and OCI-AML2 cells. Under conditions lacking Asparagine, ASX-173 shows anticancer activity at concentrations of 0-1500 nM when combined with medium or low-dose ASNase (0.025 IU/mL) in most tested cell lines such as MV4;11, Jurkat, and A172. At 0-500 nM over 48 hours, ASX-173 induces cell cycle arrest, apoptosis, and autophagy in MV4;11 leukemia cells and RS4;11_ASNS cells in the absence of Asparagine. Additionally, at 80 nM for 24 hours, ASX-173 disrupts nucleotide biosynthesis in OCI-AML2 leukemia cells treated with 0.025 IU/mL ASNase (Spectrila).
In vivo	ASX-173 (50 mg/kg, oral, once daily, for 2 weeks) enhances the anticancer effectiveness of ASNase (5,000 IU/kg, intraperitoneal injection) in NSG mice xenografted with OCI-AML2 leukemia cells expressing luciferase.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1028 mL	10.5139 mL	21.0278 mL
5 mM	0.4206 mL	2.1028 mL	4.2056 mL
10 mM	0.2103 mL	1.0514 mL	2.1028 mL
50 mM	0.0421 mL	0.2103 mL	0.4206 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

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