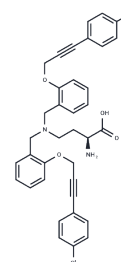


ASCT2-IN-1

Chemical Properties

CAS No. : 3032651-18-3
 Formula: C₃₆H₃₂Cl₂N₂O₄
 Molecular Weight: 627.56
 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	ASCT2-IN-1 (compound 20k) is an inhibitor of ASCT2, demonstrating IC ₅₀ values of 5.6 μM in A549 cells and 3.5 μM in HEK293 cells. It induces apoptosis and inhibits tumor growth.
Targets(IC ₅₀)	Apoptosis, Autophagy, mTOR, ASCT
In vitro	ASCT2-IN-1 is a compound that, at a concentration of 50 μM for 15 minutes, inhibits Gln uptake in A549 and HEK293 cells by targeting hASCT, with IC ₅₀ values of 5.6 μM and 3.5 μM, respectively. At concentrations ranging from 0-50 μM over 15 minutes, it enhances metabolic stability in mouse liver microsomes, exhibiting a half-life of 37.15 minutes and a clearance rate of 37.48 μL/min•mg. ASCT2-IN-1 also inhibits the amino acid transporter SNAT2 in A549 cells and the LAT1 transporter in overexpressed HEK293 cells. In A549 cells, concentrations of 5-10 μM over 24 hours suppress Gln metabolism, increase ROS production, and induce apoptosis. Under starvation, this compound inhibits AKT phosphorylation and mTORC1 activity, promoting autophagy. Additionally, ASCT2-IN-1 inhibits the proliferation of A549 cells in a dose-dependent manner. It also suppresses organoid proliferation in NSCLCs, specifically in H1975 OR and HCC827 OR cells, at concentrations between 0-10 nM over 96 hours.
In vivo	ASCT2-IN-2, when administered intraperitoneally at doses of 25 or 50 mg/kg every other day for three weeks, inhibits tumor growth by 65% in a BALB/c mouse NSCLC xenograft model.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.5935 mL	7.9674 mL	15.9347 mL
5 mM	0.3187 mL	1.5935 mL	3.1869 mL
10 mM	0.1593 mL	0.7967 mL	1.5935 mL
50 mM	0.0319 mL	0.1593 mL	0.3187 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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