

Product Data Sheet

Product Name: ASCT2-IN-1

Cat. No.: GC74029

Chemical Properties

Cas. No. 3032651-18-3

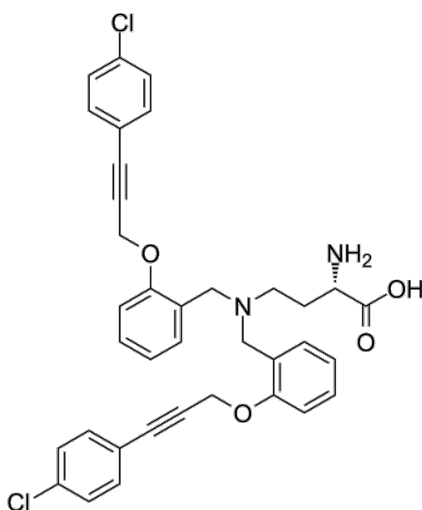
Formula $C_{36}H_{32}Cl_2N_2O_4$ M.Wt 627.56

Solubility DMSO : 100 mg/mL (159.35 mM; Need ultrasonic) Storage 4°C, protect from light, stored under nitrogen

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure



Background

ASCT2-IN-1 (compound 20k) is an ASCT2 inhibitor with IC₅₀ values of 5.6 μM and 3.5 μM in cells A549 and HEK293, respectively. ASCT2-IN-1 induces cell apoptosis. ASCT2-IN-1 inhibits tumor growth.

ASCT2-IN-1 (50 μM, 15 min) inhibits Gln uptake in cells A549 and HEK293 by targeting hASCT2, with IC₅₀ values of 5.6 μM and 3.5 μM, respectively[1]. ASCT2-IN-1 (0-50 μM, 15 min) improved metabolic stability in murine liver microsome, with a half-time of 37.15 min and a clearance of 37.48

Caution: Product has not been fully validated for medical applications. For research use only.

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μL/min•mg[1].ASCT2-IN-1 (0-50 μM, 15 min) inhibits amino acid transporter SNAT2 in cells A549 as well as transporter LAT1 in overexpressing HEK293 [1].ASCT2-IN-1 (5-10 μM, 24 h) inhibits Gln metabolism, upregulates the ROS production and thereby induces apoptosis in cell A549[1].ASCT2-IN-1 (5-10 μM, 24 h) inhibits AKT phosphorylation and mTORC1 activity under starvation, promotes cell autophagy[1].ASCT2-IN-1 (5-10 μM, 24 h) dose-dependently inhibits proliferation in A549[1].ASCT2-IN-1 (0-10 nM, 96 h) inhibits organoid proliferation of drug resistant NSCLCs in cells H1975 OR and HCC827 OR [1].

ASCT2-IN-2 (i.p.;25 or 50 mg/kg, once every two days for 3 weeks) inhibits tumor growth with a TGI of 65% in NSCLC xenograft model in BALB/c mice [1].Pharmacokinetic Analysis of ASCT2-IN-1 in Sprague-Dawley rats[1]

References:

[1]. Qin L, et al., Discovery of Novel Aminobutanoic Acid-Based ASCT2 Inhibitors for the Treatment of Non-Small-Cell Lung Cancer. J Med Chem. 2024 Jan 13. doi: 10.1021/acs.jmedchem.3c01093

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