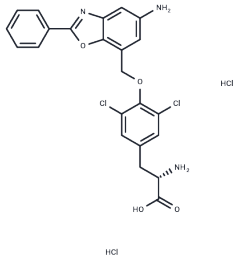
Data Sheet (Cat.No.T11727)

TargetMol

JPH203 dihydrochloride

Chemical Properties



CAS No. : 1597402-27-1

Formula: C23H21Cl4N3O4

Molecular Weight: 545.24

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	JPH203 dihydrochloride (KYT-0353 dihydrochloride) is a tyrosine analog, acts as a selective inhibitor of L-type amino acid transporter 1 (LAT1), and is used in cancer research.
Targets(IC50)	Others
In vitro	JPH203 (30 mM) induces mitochondria-dependent apoptosis in Saos2 human osteosarcoma cells. JPH203 (0.001-100 μM) inhibits 14C-leucine (1.0 μM) uptake slightly in FOB cells with an IC50 value of 92.12 ± 10.71 μM, but potently exihibts such effects in Saos2 cells with an IC50 value of 1.31 ± 0.27 μM. JPH203 (0.01 to 30 mM, 1-4 d) potently inhibits cell proliferation in Saos2 cells in a dose- and time-dependent manner, with an IC50 of 4.09-0.09 mM, but slightly inhibits that of FOB cells, with an IC50 of 24.1-2.8 mM. JPH203 Dihydrochloride is a selective inhibitor of LAT1. JPH203 inhibits 14C-leucine uptake in S2-hLAT1 and HT-29 cells, with IC50s of 0.14 μM and 0.06 μM. JPH203 (3-1000 μM) exhibits concentration-dependent inhibitory effects on S2-hLAT1 cell growth with an IC50 of 16.4 μM. JPH203 also displays inhibitory activities against HT-29 cell growth, with an IC50 value of 4.1 μM. JPH203 (0.001-100 μM) inhibits the 14C-leucine (1.0 μM) uptake in a concentration dependent way by the YD-38 cells with an IC50 value of 0.79 ± 0.06 μM. JPH203 slightly shows such effects in normal human oral keratinocytes (NHOKs). JPH203 (0.01-30 mM, 1-4 d) completely inhibits the proliferation of YD-38 cells in a dose- and time-dependent manner. However, JPH203 slightly inhibits the proliferation of NHOKs. JPH203 (30 mM) induces apoptosis of YD-38 cells. JPH203 (3 mM) also increases the level of cleaved PARP in activation of the caspases cascade.
In vivo	JPH203 exhibits dose-dependent inhibition on HT-29 tumor growth in nude mice.

Solubility Information

Solubility	DMSO: 200 mg/mL (366.81 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8341 mL	9.1703 mL	18.3405 mL
5 mM	0.3668 mL	1.8341 mL	3.6681 mL
10 mM	0.1834 mL	0.917 mL	1.8341 mL
50 mM	0.0367 mL	0.1834 mL	0.3668 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

Oda K, et al. L-type amino acid transporter 1 inhibitors inhibit tumor cell growth. Cancer Sci. 2010 Jan;101(1):173-9.

Yun DW, et al. JPH203, an L-type amino acid transporter 1-selective compound, induces apoptosis of YD-38 human oral cancer cells. J Pharmacol Sci. 2014;124(2):208-17. Epub 2014 Feb 4.

Choi DW, et al. JPH203, a selective L-type amino acid transporter 1 inhibitor,Choi DW, et al. JPH203, a selective L-type amino acid transporter 1 inhibitor, induces mitochondria-dependent apoptosis in Saos2 human osteosarcoma cells. Korean J Physiol Pharmacol. 2017 Nov;21(6):599-607.