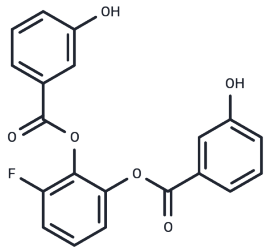
Data Sheet (Cat.No.T7018)

TargetMol

WZB117

Chemical Properties



CAS No. : 1223397-11-2

Formula: C20H13FO6

Molecular Weight: 368.31

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	WZB117 is a Glucose Transporter 1 (GLUT1) inhibitor. when IC50 of WZB117 approximate 10 μM, it inhibits lung cancer A549 cells and breast cancer MCF7 cells proliferation.
Targets(IC50)	transporter
In vitro	WZB117 treats Cancer cell resulting in decreases in levels of Glut1 protein, intracellular ATP, and glycolytic enzymes. And WZB117 inhibits glucose transport in human red blood cells. The declines in cyclin E2 as well as phosphorylated retinoblastoma and increases in ATP-sensing enzyme AMP-activated protein kinase (AMPK), lead to the cell-cycle arrest, senescence, and necrosis.
In vivo	WZB117 inject 10 mg/kg daily intraperitoneal into nude mice, which were grafted human A549 lung cancer, show 70% reduction in tumor volume.
Kinase Assay	Recombinant proteins expressed with Sf21 cells and baculovirus vectors are purified with affinity chromatography. JAK kinase assay is done by a homogeneous time-resolved fluorescence assay with the peptide substrate (-EQEDEPEGDYFEWLE). Each enzyme reaction is carried out with Ruxolitinib or control, JAK enzyme, 500 nM peptide, adenosine triphosphate (ATP; 1 mM), and 2% dimethyl sulfoxide (DMSO) for 1 hour. IC50 is the INCB018424 concentration required for inhibition of 50% of the fluorescent signal.
Cell Research	Human non-small cell lung cancer (NSCLC) cell lines H1299 and A549 are treated with compound WZB117（10 μM） for 24 or 48 hours.
Animal Research	Male NU/J nude mice were given intraperitoneal injection with WZB117 (10 mg/kg) daily for 10 weeks.

Solubility Information

Solubility	DMSO: 250 mg/mL (678.78 mM),Sonication is recommended. Ethanol: 36.8 mg/mL (99.92 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.43 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one.*

In vivo Formulation	*Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7151 mL	13.5755 mL	27.151 mL
5 mM	0.543 mL	2.7151 mL	5.4302 mL
10 mM	0.2715 mL	1.3576 mL	2.7151 mL
50 mM	0.0543 mL	0.2715 mL	0.543 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

Liu Y, et al. Mol Cancer Ther. 2012, 11(8):1672-1682.
Chen X, Zhao Y, He C, et al. Identification of a novel GLUT1 inhibitor with in vitro and in vivo anti-tumor activity. International Journal of Biological Macromolecules. 2022, 216: 768-778.
Chen J, Wu D, Dong Z, et al. The expression and role of glycolysis-associated molecules in infantile hemangioma[J]. Life Sciences. 2020, 259: 118215.
Chen J, Wu D, Dong Z, et al. The expression and role of glycolysis-associated molecules in infantile hemangioma. Life Sciences. 2020, 259: 118215.
Liu Y, Hou Y, Zhang F, et al.ENO1 deletion potentiates ferroptosis and decreases glycolysis in colorectal cancer cells via AKT/STAT3 signaling.Experimental and Therapeutic Medicine.2024, 27(4): 1-9.