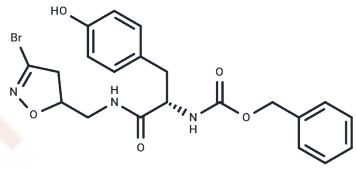
Data Sheet (Cat.No.T27717)

TargetMol

KCC009

Chemical Properties



CAS No. : 744198-19-4

Formula: C21H22BrN3O5

Molecular Weight: 476.32

Storage: Keep away from direct sunlight
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	KCC009 is a competitive transglutaminase 2 (TG2) inhibitor (IC50 = 20 μM). It sensitizes cancer cells to chemotherapy by blocking TG2-mediated survival signaling in glioblastoma research.
Targets(IC50)	Glutaminase
In vitro	KCC009 (3.91 uM) induces radiosensitization in H1299 lung cancer cells by inhibiting TG2-mediated protein cross-linking [1].
In vivo	KCC009 disrupts fibronectin assembly in mouse glioblastoma models, enhancing drug penetration and prolonging survival [2].

Solubility Information

Solubility	DMSO: 200 mg/mL (419.89 mM),Sonication is recommmended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0994 mL	10.4971 mL	20.9943 mL
5 mM	0.4199 mL	2.0994 mL	4.1989 mL
10 mM	0.2099 mL	1.0497 mL	2.0994 mL
50 mM	0.042 mL	0.2099 mL	0.4199 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

J Y Miao, et al. Inhibitors of phospholipase promote apoptosis of human endothelial cells. J Biochem. 1997 Mar;121 (3):612-8.

Yuan L, Siegel M, Choi K, Khosla C, Miller CR, Jackson EN, Piwnica-Worms D, Rich KM. Transglutaminase 2 inhibitor, KCC009, disrupts fibronectin assembly in the extracellular matrix and sensitizes orthotopic glioblastomas to chemotherapy. Oncogene. 2007 Apr 19;26(18):2563-73. PubMed PMID: 17099729.

Strnad P, Siegel M, Toivola DM, Choi K, Kosek JC, Khosla C, Omary MB. Pharmacologic transglutaminase inhibition attenuates drug-primed liver hypertrophy but not Mallory body formation. FEBS Lett. 2006 Apr 17;580(9):2351--2357. PubMed PMID: 16616523.

Konoplyannikov M, Nurminskaya M. New therapeutic approaches to arterial calcification via inhibition of transglutaminase and β-catenin signaling. Curr Pharm Des. 2014;20(37):5811-20. Review. PubMed PMID: 24533936.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481