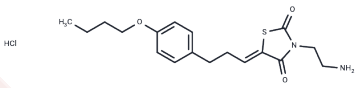
Data Sheet (Cat.No.TQ0138)

TargetMol

K145 hydrochloride

Chemical Properties



CAS No. : 1449240-68-9

Formula: C18H25ClN2O3S

Molecular Weight: 384.92

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	K145 hydrochloride is a selective sphk2 inhibitor with substrate competitiveness and oral activity, with IC50 of 4.3 μM and Ki of 6.4 μM. K145 hydrochloride can induce apoptosis and has strong antitumor activity.
Targets(IC50)	Apoptosis,S1P Receptor
In vitro	K145 inhibited the activity of SphK2 in a dose-dependent manner with an IC50 of 4.30 uM. The Lineweaver-Burk analysis revealed a Ki of 6.4±0.7 uM for SphK2 and indicated that K145 is a substrate competitive inhibitor (with sphingosine). K145 accumulates in U937 cells, suppresses the S1P level, and inhibits SphK2. K145 also exhibited inhibitory effects on the growth of U937 cells as well as apoptotic effects in U937 cells, and that these effects may be through the inhibition of downstream ERK and Akt signaling pathways.

Solubility Information

Solubility	H2O: 125 mg/mL (324.74 mM),Sonication and heating are recommended. DMSO: 250 mg/mL (649.49 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: < 10 mg/mL (25.98 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+40% PEG300+5% Tween-80+45% Saline: 1 mg/mL (2.6 mM),Sonication is recommended. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (25.98 mM),Solution. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. 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	2.5979 mL	12.9897 mL	25.9794 mL
5 mM	0.5196 mL	2.5979 mL	5.1959 mL
10 mM	0.2598 mL	1.299 mL	2.5979 mL
50 mM	0.052 mL	0.2598 mL	0.5196 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 K, et al. Biological characterization of 3-(2-amino-ethyl)-5-[3-(4-butoxyl-phenyl)-propylidene]-thiazolidine-2,4-dione (K145) as a selective sphingosine kinase-2 inhibitor and anticancer agent. PLoS One. 2013;8(2):e56471.
Zhang L, Yi Y, Wang T, et al.25-Hydroxycholesterol inhibits classical swine fever virus entry into porcine alveolar macrophages by depleting plasma membrane cholesterol.Veterinary Microbiology.2023: 109668.