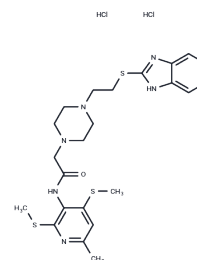


K-604 dihydrochloride

Chemical Properties

CAS No. : 217094-32-1
 Formula: C₂₃H₃₂Cl₂N₆O₅
 Molecular Weight: 575.64
 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	K-604 dihydrochloride, a potent and selective acyl-CoA:cholesterol acyltransferase 1 inhibitor, exhibits an IC ₅₀ of 0.45±0.06 μM.
Targets(IC ₅₀)	Acyltransferase
In vitro	a novel ACAT inhibitor, K-604. The IC ₅₀ values of K-604 for human ACAT-1 and ACAT-2 were 0.45 and 102.85 micromol/L, respectively, indicating that K-604 is 229-fold more selective for ACAT-1. Kinetic analysis indicated that the inhibition was competitive with respect to oleoyl-coenzyme A with a K _i value of 0.378 micromol/L. Exposure of human monocyte-derived macrophages to K-604 inhibited cholesterol esterification with IC ₅₀ of 68.0 nmol/L. Furthermore, cholesterol efflux from THP-1 macrophages to HDL(3) or apolipoprotein A-I was enhanced by K-604[1].

Solubility Information

Solubility	DMSO: 150 mg/mL (260.58 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: 2.5 mg/mL (4.34 mM),Sonication is recommended. 10% DMSO+90% Saline: 10 mg/mL (17.37 mM),Solution. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7372 mL	8.686 mL	17.372 mL
5 mM	0.3474 mL	1.7372 mL	3.4744 mL
10 mM	0.1737 mL	0.8686 mL	1.7372 mL
50 mM	0.0347 mL	0.1737 mL	0.3474 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

Ikenoya M, et al. A selective ACAT-1 inhibitor, K-604, suppresses fatty streak lesions in fat-fed hamsters without affecting plasma cholesterol levels. *Atherosclerosis*. 2007 Apr;191(2):290-7.

Shibuya Y, et al. Acyl-coenzyme A:cholesterol acyltransferase 1 blockage enhances autophagy in the neurons of triple transgenic Alzheimer's disease mouse and reduces human P301L-tau content at the presymptomatic stage. *Neurobiol Aging*. 2015 Jul;36(7):2248-2259.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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