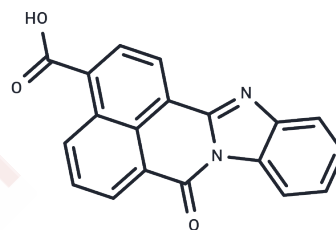


STO-609

Chemical Properties

CAS No. : 52029-86-4
 Formula: C₁₉H₁₀N₂O₃
 Molecular Weight: 314.29
 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	STO-609 is a specific and cell-permeable inhibitor of the Ca ²⁺ /calmodulin-dependent protein kinase kinase (CaM-KK) for recombinant CaM-KK α /KK β (K _i : 80/15 ng/mL).
Targets(IC50)	CaMK,AMPK,Autophagy
In vitro	STO-609 also inhibits their autophosphorylation activities. STO-609 is highly selective for CaM-KK without any significant effect on the downstream CaM kinases (CaM-KI and -IV), and the IC ₅₀ value of the compound against CaM-KII is 10 μ g/mL. STO-609 inhibits constitutively active CaM-KK α as well as the wild-type enzyme. In transfected HeLa cells, STO-609 dose-dependently suppresses the Ca ²⁺ -induced activation of CaM-KIV. STO-609 (1 μ g/mL) significantly reduces the endogenous activity of CaM-KK in SH-SY5Y neuroblastoma cells (80%).

Solubility Information

Solubility	DMSO: 15 mg/mL (47.73 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.1818 mL	15.9089 mL	31.8177 mL
5 mM	0.6364 mL	3.1818 mL	6.3635 mL
10 mM	0.3182 mL	1.5909 mL	3.1818 mL
50 mM	0.0636 mL	0.3182 mL	0.6364 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

- Tokumitsu H, et al. STO-609, a specific inhibitor of the Ca(2+)/calmodulin-dependent protein kinase kinase. J Biol Chem. 2002 May 3;277(18):15813-8. Epub 2002 Feb 26.
- Kan J, Zhao C, Lu S, et al. S100A16, a novel lipogenesis promoting factor in livers of mice and hepatocytes in vitro. Journal of Cellular Physiology. 2019 May 8
- Kukimoto-Niino M, et al. Crystal structure of the Ca²⁺/calmodulin-dependent protein kinase kinase in complex with the inhibitor STO-609. J Biol Chem. 2011 Jun 24;286(25):22570-9.
- Xu J, Xu X, Ling Y, et al. Vincamine as an agonist of G-protein-coupled receptor 40 effectively ameliorates diabetic peripheral neuropathy in mice. Acta Pharmacologica Sinica. 2023: 1-16.
- Kan J, Zhao C, Lu S, et al. S100A16, a novel lipogenesis promoting factor in livers of mice and hepatocytes in vitro [J]. Journal of cellular physiology. 2019 May 8.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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