

CAY10746

Chemical Properties

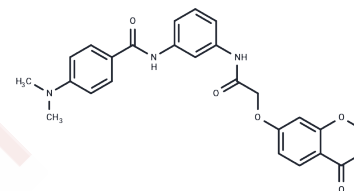
CAS No. : 2247240-76-0

Formula: C₂₆H₂₃N₃O₅

Molecular Weight: 457.48

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	CAY10746 is a selective Rho kinase (ROCK) inhibitor, targeting ROCK I and ROCK II with IC ₅₀ values of 0.014 μM and 0.003 μM, respectively. CAY10746 can be employed in the study of diabetic retinopathy.
Targets(IC ₅₀)	ROCK
In vitro	CAY10746 (0.1-10 μM) inhibits phosphorylation of the ROCK target protein MYPT1 in SH-SY5Y cells and also inhibits the migration of human umbilical vein endothelial cells (HUVECs).[1] CAY10746 (1 μM) protects isolated mouse retinal neurons from apoptosis and oxidative stress induced by high glucose in an in vitro model of diabetic retinopathy. It also promotes high glucose-induced vessel regression in mouse retinal explants.[1] CAY10746 is an inhibitor of Rho-associated kinase I (ROCK-I) and ROCK-II (IC ₅₀ s = 14 and 3 nM, respectively).[1]

Solubility Information

Solubility	DMSO: 40 mg/mL (87.44 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 (4.37 mM), Sonication is recommended. <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	2.1859 mL	10.9294 mL	21.8589 mL
5 mM	0.4372 mL	2.1859 mL	4.3718 mL
10 mM	0.2186 mL	1.0929 mL	2.1859 mL
50 mM	0.0437 mL	0.2186 mL	0.4372 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

Zhao L, et al. Discovery of 4H-Chromen-4-one Derivatives as a New Class of Selective Rho Kinase (ROCK) Inhibitors, which Showed Potent Activity in ex Vivo Diabetic Retinopathy Models. *J Med Chem.* 2019 Dec 12;62(23):10691-10710.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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