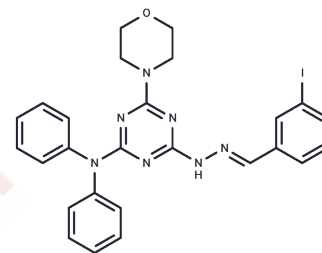


Vacuolin-1

Chemical Properties

CAS No. :	351986-85-1
Formula:	C ₂₆ H ₂₄ N ₇ O
Molecular Weight:	577.42
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	Vacuolin-1 is a cell-permeable inhibitor of Ca ²⁺ dependent fusion of lysosomes to the cell membrane. It acts by inhibiting release of lysosomal content. vacuolin-1 is a potent and selective PI3K inhibitor and inhibits late-stage autophagy by impairing lysosomal maturation
Targets(IC50)	Autophagy,PI3K
In vivo	vacuolin-1 potently and reversibly inhibited the fusion between autophagosomes and lysosomes in mammalian cells, thereby inducing the accumulation of autophagosomes [1].

Solubility Information

Solubility	DMSO: 9.9 mg/mL (17.15 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	1.7318 mL	8.6592 mL	17.3184 mL
5 mM	0.3464 mL	1.7318 mL	3.4637 mL
10 mM	0.1732 mL	0.8659 mL	1.7318 mL
50 mM	0.0346 mL	0.1732 mL	0.3464 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

Yingying Lu, et al. Vacuolin-1 potently and reversibly inhibits autophagosome-lysosome fusion by activating RAB5A. Autophagy

Yan R, Zhang P, Shen S, et al. Carnosine regulation of intracellular pH homeostasis promotes lysosome-dependent tumor immunoevasion. Nature Immunology. 2024: 1-13.

Osamu Sano, et al. Vacuolin-1 inhibits autophagy by impairing lysosomal maturation via PIKfyve inhibition. FEBS Lett. 2016 Jun;590(11):1576-85.

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