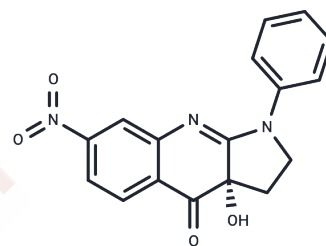


(S)-nitro-Blebbistatin

Chemical Properties

CAS No. :	856925-75-2
Formula:	C ₁₇ H ₁₃ N ₃ O ₄
Molecular Weight:	323.3
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	(S)-nitro-Blebbistatin is a more stable form of (-)-blebbistatin, which is a selective cell-permeable inhibitor of non-muscle myosin II ATPases. (-)-Blebbistatin rapidly and reversibly inhibits Mg-ATPase activity and in vitro motility of non-muscle myosin IIA and IIB for several species (IC ₅₀ s = 0.5-5 μM), while poorly inhibiting smooth muscle myosin (IC ₅₀ = 80 μM). Through these effects, it blocks apoptosis-related bleb formation, directed cell migration, and cytokinesis in vertebrate cells. However, prolonged exposure to blue light (450-490 nm) results in degradation of blebbistatin to an inactive product via cytotoxic intermediates, which may be problematic for its use in fluorescent live cell imaging applications. The addition of a nitro group stabilizes the molecule to circumvent its degradation by prolonged blue light exposure. (S)-nitro-Blebbistatin has the same stereochemistry as the active (-)-blebbistatin enantiomer.
Targets(IC ₅₀)	Others

Solubility Information

Solubility	DMSO:PBS(pH7.2) (1:1): 0.5 mg/mL (1.55 mM),Sonication is recommended. DMSO: 16 mg/mL (49.49 mM),Sonication is recommended. DMF: 16 mg/mL (49.49 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	3.0931 mL	15.4655 mL	30.931 mL
5 mM	0.6186 mL	3.0931 mL	6.1862 mL
10 mM	0.3093 mL	1.5466 mL	3.0931 mL
50 mM	0.0619 mL	0.3093 mL	0.6186 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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