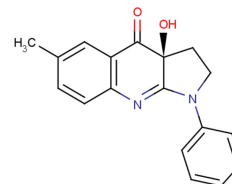


(-)-Blebbistatin

Chemical Properties

CAS No.:	856925-71-8
Formula:	C ₁₈ H ₁₆ N ₂ O ₂
Molecular Weight:	292.33
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).



Biological Description

Description	(-)-Blebbistatin is an S enantiomer of blebbistatin. It is a potent and selective myosin II inhibitor with IC ₅₀ ranging from 0.5 to 5 μM.
Targets(IC ₅₀)	non-muscle myosin II ATPases: 0.5μM-5μM
In vivo	Blebbistatin dose-dependently and completely relax both KCl- and carbachol-induced rat detrusor and endothelin-1-induced human bladder contraction. Pre-incubation with 10 μM blebbistatin attenuates carbachol responsiveness by 65% while blocking electrical field stimulation-induced bladder contraction reaching 50% inhibition at 32 Hz[4].
Cell Research	Freshly isolated HSCs are replated on 96-well plate. At day 3, medium is replaced by serum-free medium and cells are starved overnight, treated with or without blebbistatin (25 μM) for 2 h followed by stimulation with platelet-derived growth factor-BB (20 ng/mL). After an overnight incubation, the WST-1 cell proliferation assay are performed[3].
Animal Research	

Solubility Information

Solubility	DMSO: 29.2 mg/mL (100 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.421 mL	17.104 mL	34.208 mL
5 mM	0.684 mL	3.421 mL	6.842 mL
10 mM	0.342 mL	1.71 mL	3.421 mL
50 mM	0.068 mL	0.342 mL	0.684 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

1. Straight AF, et al. Science, 2003, 299(5613), 1743-1747.
2. Limouze J, et al. J Muscle Res Cell Motil, 2004, 25(4-5), 337-341.
3. Kovács M, et al. J Biol Chem, 2004, 279(34), 35557-35563
4. Zhang X, et al. In vitro and in vivo relaxation of urinary bladder smooth muscle by the selective myosin IIinhibitor, blebbistatin. BJU Int. 2011 Jan;107(2):310-7.
5. Tian X, Gao M, Li A, et al. Protocol for Isolation of Viable Adult Rat Cardiomyocytes with High Yield[J]. STAR Protocols. 2020: 100045.

Inhibitors · Natural Compounds · Compound Libraries

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