

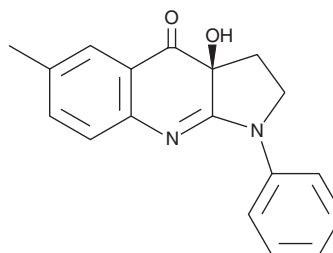
Product Information



(-)-Blebbistatin

Catalog No. 13013

CAS Registry No.: 856925-71-8
Formal Name: 1,2,3,3a-tetrahydro-3aS-hydroxy-6-methyl-1-phenyl-4H-Pyrrolo[2,3-b]quinolin-4-one
Synonym: (S)-Blebbistatin
MF: C₁₈H₁₆N₂O₂
FW: 292.3
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that (-)-blebbistatin be stored as supplied at -20°C. It should be stable for at least two years.

(-)-Blebbistatin is supplied as a crystalline solid. A stock solution may be made by dissolving the (-)-blebbistatin in an organic solvent purged with an inert gas. (-)-Blebbistatin is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of (-)-blebbistatin in these solvents is approximately 12.5 mg/ml.

(-)-Blebbistatin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (-)-blebbistatin should be dissolved in DMF and then diluted with the aqueous buffer of choice. (-)-Blebbistatin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

(-)-Blebbistatin is a selective cell-permeable inhibitor of non-muscle myosin II ATPases.^{1,2} It rapidly and reversibly inhibits Mg-ATPase activity and *in vitro* motility of non-muscle myosin IIA and IIB for several species (IC₅₀ = 0.5-5.0 μM), while poorly inhibiting smooth muscle myosin (IC₅₀ = 80 μM).³ Through these effects, blebbistatin blocks apoptosis-related bleb formation, directed cell migration and cytokinesis in vertebrate cells. Blebbistatin is inactivated by UV light,⁴ which may be particularly important in fluorescent cell imaging applications.

References

1. Straight, A.F., Cheung, A., Limouze, J., *et al.* Dissecting temporal and spatial control of cytokinesis with a myosin II inhibitor. *Science* **299**, 1743-1747 (2003).
2. Kovács, M., Tóth, J., Hetényi, C., *et al.* Mechanism of blebbistatin inhibition of myosin II. *J. Biol. Chem.* **279**(34), 35557-35563 (2004).
3. Limouze, J., Straight, A.F., Mitchison, T., *et al.* Specificity of blebbistatin, an inhibitor of myosin II. *Journal of Muscle Research and Cell Motility* **25**, 337-341 (2004).
4. Kolega, J. Phototoxicity and photoinactivation of blebbistatin in UV and visible light. *Biochem. Biophys. Res. Commun.* **320**, 1020-1025 (2004).

Related Products

(+)-Blebbistatin - Cat. No. 13165 • CAY10503 - Cat. No. 10008872 • Cell Cycle Phase Determination Kit - Cat. No. 10009349 • (R)-Roscovitine - Cat. No. 10009569 • CAY10561 - Cat. No. 10010043 • Olomoucine - Cat. No. 10010240 • CAY10554 - Cat. No. 10010301 • DRB - Cat. No. 10010302 • Apoptotic Blebs Assay Kit - Cat. No. 10010750 • CAY10574 - Cat. No. 10011247 • NSC 210902 - Cat. No. 10011255

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WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

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