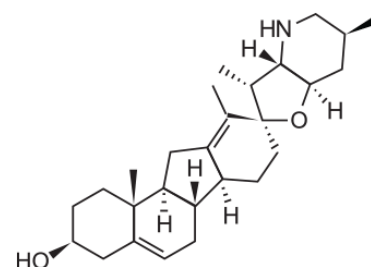


Cyclopamine

Catalog Number: ST10026

Size	2 mg
Description	Cyclopamine inhibits the hedgehog signaling pathway by direct inhibition of Smoothened (IC ₅₀ = 46 nM). It has been utilized as a small molecule inducer of stem cell differentiation towards definitive endoderm pancreatic islet cells. Cyclopamine has also been shown to inhibit the growth of human and mouse medulloblastoma cells, and human glioblastoma cells.
Molecular Weight	411.62
Molecular Formula	C ₂₇ H ₄₁ NO ₂
Chemical Name	(3S,3'R,3'aS,6'S,6aS,6bS,7'aR,9R,11aS,11bR)-3',6',10,11b-tetramethylspiro[2,3,4,6,6a,6b,7,8,11,11a-decahydro-1H-benzo[a]fluorene-9,2'-3a,4,5,6,7,7a-hexahydro-3H-furo[3,2-b]pyridine]-3-ol
CAS Number	4449-51-8
PubChem Identifier	442972
Appearance	White solid
Purity	>99% by HPLC analysis
Solubility	Soluble in ethanol at 5 mM
Reconstitution	For a 5 mM concentrated stock solution, reconstitute the compound by adding 972 μL of ethanol to the entire contents of vial. If precipitate is observed, warm the solution to 37°C for 2 to 5 minutes.
Recommended Usage	For use in cell culture, warm medium just prior to adding the reconstituted compound. Once the compound is added, mix and filter-sterilize the medium using a 0.2 μM low-protein binding filter.
Storage and Stability	Solid: Shipped at room temperature. Store at -20°C. Stable for 6 months when stored as directed. Solution: Following reconstitution, store aliquots in tightly sealed vials at -20°C. Avoid repeated freeze-thaw cycles.
References	<p>Bar, E.E., et al. (2007) Cyclopamine-mediated hedgehog pathway inhibition depletes stem-like cancer cells in glioblastoma. <i>Stem Cells</i> 25: 2524-2533. PMID: 17628016.</p> <p>Berman, D.M., et al. (2002) Medulloblastoma growth inhibition by hedgehog pathway blockade. <i>Science</i> 297: 1559-1561. PMID: 12202832.</p> <p>Chen, J.K., et al. (2002) Inhibition of Hedgehog signaling by direct binding of cyclopamine to Smoothened. <i>Genes Dev</i> 16: 2743-2748. PMID: 12414725.</p> <p>D'Amour, K.A., et al. (2006) Production of pancreatic hormone-expressing endocrine cells from human embryonic stem cells. <i>Nat Biotechnol</i> 24: 1392-1401. PMID: 17053790.</p>



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