



Xcess Biosciences Inc.

7144 N Harlem Ave #169
Chicago, IL 60631 USA

<http://www.xcessbio.com>

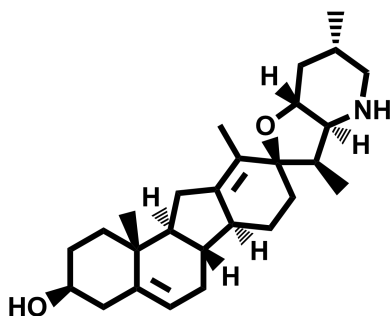
Toll free: 1-866-706-2330

Fax: 1-619- 810-0718

Email: info@xcessbio.com

Hedgehog Antagonist Cyclopamine

Chemical Name: (2'R,3S,3'R,3a'S,6aS,6bS,6'S,7a'R,11aS,11bR)-3',6',10,11b-tetramethyl-1,2,3,3a',4,4',5',6,6a,6b,6',7,7',7a',8,11,11a,11b-octadecahydro-3'H-spiro[benzo[a]fluorene-9,2'-furo[3,2-b]pyridin]-3-ol



Molecular Weight:	411.62
Formula:	C ₂₇ H ₄₁ NO ₂
Purity:	≥98%
CAS#:	4449-51-8
Solubility:	DMSO up to 20 mM
Storage	Powder: 4°C 1 year DMSO: 4°C 3 month -20°C 1 year

Biological Activity:

Cyclopamine is a potent and selective inhibitor of the hedgehog signaling with an IC₅₀ ~46 nM, acting as an antagonist of Smoothened. It is a natural product isolated from the corn lily (*Veratrum californicum*). As the hedgehog signaling pathway plays very important roles in embryogenesis and cancer progression, Cyclopamine has been used in stem cell differentiation, such as pancreatic cell differentiation from ESC/iPSC, or treating Hh pathway dependent cancer in vitro and in vivo.

How to Use:

In vitro: Cyclopamine was used at 3 μM in vitro and in cellular assays.

In vivo: Cyclopamine was administered at 50 mg/kg by subcutaneous injection once per day in tumor xenograft mouse model.

Reference:

1. Chen JK, et al. Inhibition of Hedgehog signaling by direct binding of cyclopamine to Smoothened. (2002) *Genes Dev.* 16(21):2743-8.
2. Scott MP. Cancer: a twist in a hedgehog's tale. (2003) *Nature.* 425(6960):780-2.
3. D'Amour KA, et al. Production of pancreatic hormone-expressing endocrine cells from human embryonic stem cells. (2006) *Nat Biotechnol.* 24(11):1392-401.
4. Bar EE, et al. Cyclopamine-mediated hedgehog pathway inhibition depletes stem-like cancer cells in glioblastoma. (2007) *Stem Cells.* 25(10):2524-33.
5. Jiang J, et al. Hedgehog signaling in development and cancer. (2008) *Dev Cell.* 15(6):801-12.

Products are for research use only. Not for human use.