

Cat No. 29-O52

Cyclopamine

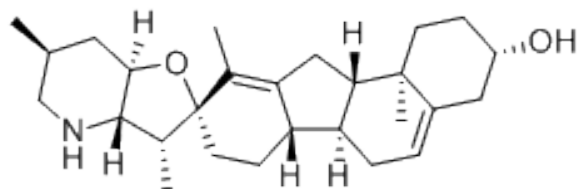
5 mg



For research purposes only

Cyclopamine is a small molecule inhibitor of the sonic hedgehog pathway (Hh) by binding to the heptahelical bundle of Smoothened. It inhibits the growth of medulloblastoma cells. Hedgehog signaling is involved in embryogenesis as well as cancer progression. Cyclopamine has been used as a small molecule inducer of stem cell differentiation towards definitive endoderm pancreatic islet cells, as a modulator of cell proliferation and as an anticancer drug. It is a steroid alkaloid and originally identified as a teratogenic agent.

TECHNICAL INFORMATION



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

Chemical Formula: C₂₇H₄₁NO₂

CAS Number: 4449-51-8

Molecular Weight: 411.62

Purity: >99%

Appearance: Off white solid

Solubility: DMSO

STORAGE AND HANDLING

Storage: Store at 4°C and protected from light. Following reconstitution, store aliquots at -20°C.

Stability: Stock solutions stable at -20°C for up to 2 years.

Shipping Conditions: Shipped at room temperature.

PRODUCT USE

Soluble in DMSO. For a 10 mM concentrated stock solution, reconstitute the compound by adding 486 µl of DMSO to the entire contents of the vial. Note: for most cells, the maximum tolerance to DMSO is <0.5%.

REFERENCES

1. Chen et al. (2002). Inhibition of Hedgehog signaling by direct binding of cyclopamine to Smoothened. *Genes Dev.* 16(21):2743-8.
2. Kumar et al. (2008). Targeted inhibition of hedgehog signaling by cyclopamine prodrugs for advanced prostate cancer. *Bioorg Med Chem.* 16(6):2764-8.
3. Bar et al. (2007). Cyclopamine-mediated hedgehog pathway inhibition depletes stem-like cancer cells in glioblastoma. *Stem Cells.* 25(10):2524-33.