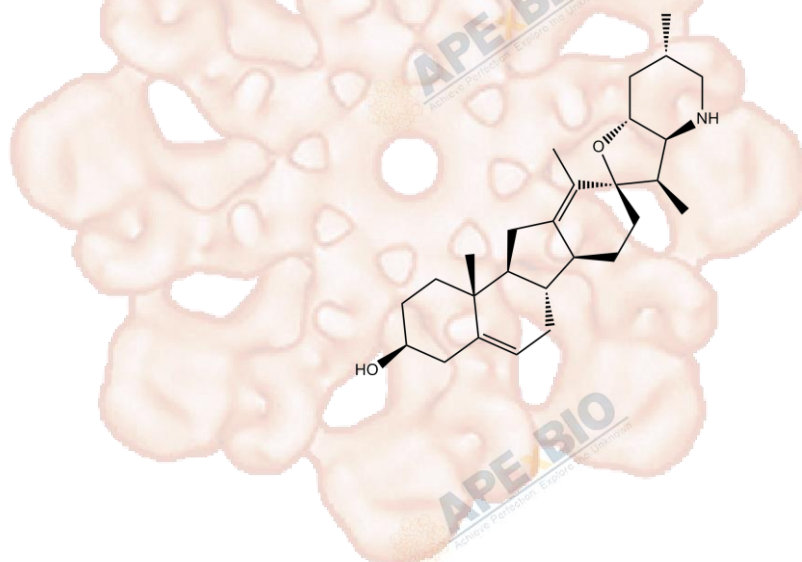


# Product Data Sheet

## Cyclopamine

|                  |                 |
|------------------|-----------------|
| <b>Cat. No.:</b> | A8340           |
| <b>CAS No.:</b>  | 4449-51-8       |
| <b>Formula:</b>  | C27H41NO2       |
| <b>M.Wt:</b>     | 411.62          |
| <b>Synonyms:</b> | 11-Deoxojervine |
| <b>Target:</b>   | Stem Cell       |
| <b>Pathway:</b>  | Hedgehog        |
| <b>Storage:</b>  | Store at -20°C  |



### Solvent & Solubility

insoluble in EtOH; insoluble in H<sub>2</sub>O; ≥6.86 mg/mL in DMSO

In Vitro

| Preparing Stock Solutions | Mass                  |           |            |            |
|---------------------------|-----------------------|-----------|------------|------------|
|                           | Solvent Concentration | 1mg       | 5mg        | 10mg       |
|                           | 1 mM                  | 2.4294 mL | 12.1471 mL | 24.2943 mL |
|                           | 5 mM                  | 0.4859 mL | 2.4294 mL  | 4.8589 mL  |
|                           | 10 mM                 | 0.2429 mL | 1.2147 mL  | 2.4294 mL  |

Please refer to the solubility information to select the appropriate solvent.

### Biological Activity

Shortsummary

Hedgehog (Hh) signaling Inhibitor

IC<sub>50</sub> & Target

46 nM (Smoothened (Smo))

In Vitro

#### Cell Viability Assay

|                      |   |
|----------------------|---|
| Cell Line:           | AA/C1, RG/C2, CaCo2, HT29 and SW480 cells   |
| Preparation method:  | The solubility of this compound in DMSO is  |
| Reacting conditions: | 20 μM, 48 hours for cell yield inhibition 10 μM, 48 hours for apoptosis induction (measured by PARP expression) |
| Applications:        | Treatment of cyclopamine significantly reduced cell yield in all the tested                                     |

|         |                          |   |
|---------|--------------------------|---|
|         |                          | human colorectal tumour cell lines with a dose-dependent manner. Cyclopamine also remarkably induced apoptosis in each of the cell lines. The CaCo2 cell line showed particular sensitivity to cyclopamine-induced apoptosis.   |
| In Vivo | <b>Animal experiment</b> |   |
|         | Animal models:           | C57BL/6J mice   |
|         | Dosage form:             | Intraperitoneal injection, 160 mg/kg/day for 31 hours.  |
|         | Applications:            | Cyclopamine showed teratogenic potential in the tested animals. Affected embryos were slightly smaller than normal littermates and exhibited mild blunting of the snout as well as cleft lip and palate. Embryos exhibited unilateral and bilateral complete cleft lip with clefts extending into the primary and secondary palate. Facial clefts were often accompanied by open eyelid defects and in one embryo by forelimb syndactyly. |
|         | Other notes:             | Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.  |

## Product Citations

1. Fan SM, Chang YT, et al. "External light activates hair follicle stem cells through eyes via an ipRGC-SCN-sympathetic neural pathway." Proc Natl AcadSci U S A. 2018 Jul 17;115(29):E6880-E6889.PMID:29959210

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## References

[1] Qualtrough D, Buda A, Gaffield W, et al. Hedgehog signalling in colorectal tumour cells: induction of apoptosis with cyclopamine treatment. International journal of cancer, 2004, 110(6): 831-837.

[2] Lipinski R J, Hutson P R, Hannam P W, et al. Dose-and route-dependent teratogenicity, toxicity, and pharmacokinetic profiles of the hedgehog signaling antagonist cyclopamine in the mouse. Toxicological sciences, 2008, 104(1): 189-197.

## Caution

**FOR RESEARCH PURPOSES ONLY.**

**NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.



**APExBIO Technology**

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