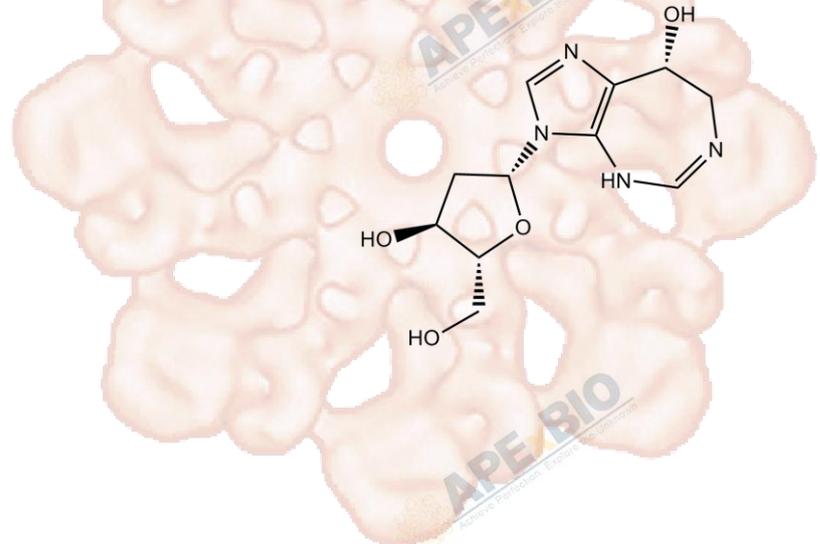


# Product Data Sheet

## Pentostatin

|                  |   |
|------------------|---|
| <b>Cat. No.:</b> | A3708   |
| <b>CAS No.:</b>  | 53910-25-1  |
| <b>Formula:</b>  | C <sub>11</sub> H <sub>16</sub> N <sub>4</sub> O <sub>4</sub> |
| <b>M.Wt:</b>     | 268.27  |
| <b>Synonyms:</b> | Deoxycoformycin   |
| <b>Target:</b>   | GPCR/G protein  |
| <b>Pathway:</b>  | Adenosine Receptor  |
| <b>Storage:</b>  | Store at -20°C  |



### Solvent & Solubility

≥26.8 mg/mL in H<sub>2</sub>O; insoluble in EtOH; ≥13.4 mg/mL in DMSO

In Vitro

| Preparing Stock Solutions | Solvent       |  | Mass      |            |            |
|---------------------------|---------------|--|-----------|------------|------------|
|                           | Concentration |  | 1mg       | 5mg        | 10mg       |
|                           | 1 mM          |  | 3.7276 mL | 18.6379 mL | 37.2759 mL |
|                           | 5 mM          |  | 0.7455 mL | 3.7276 mL  | 7.4552 mL  |
|                           | 10 mM         |  | 0.3728 mL | 1.8638 mL  | 3.7276 mL  |

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

### Biological Activity

Shortsummary

Irreversible adenosine deaminase inhibitor

IC<sub>50</sub> & Target

#### Cell Viability Assay

In Vitro

|                     |  |
|---------------------|--|
| Cell Line:          | Cultured mononuclear cells and purified γδ+ tumour cells from bone marrow or peripheral blood of four patients with hepatosplenic γδ+ T-cell lymphoma  |
| Preparation method: | The solubility of this compound in DMSO is >13.4 mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months. |

|         |                          |   |
|---------|--------------------------|---|
|         | Reacting conditions:     | 10-100 $\mu$ M, 48 h  |
|         | Applications:            | Pentostatin (10 $\mu$ M) displayed an early and selective cytotoxic effect on $\gamma\delta$ + tumour T cells. After 48 h of in vitro exposure to pentostatin reduced the absolute number of viable CD3+/ $\gamma\delta$ + tumour T cells. Exposure to pentostatin (5 days) plus dAdo revealed the persistence of normal CD3+/ $\alpha\beta$ + T cells. Combination of pentostatin (10–100 $\mu$ M) plus dAdo dose-dependently inhibited clonogenic growth and [3H]-thymidine incorporation in purified CD3+/ $\alpha\beta$ -/ $\gamma\delta$ + tumour cells. |
| In Vivo | <b>Animal experiment</b> |   |
|         | Animal models:           | Mice infected with Trypanosoma evansi   |
|         | Dosage form:             | 2 mg/kg   |
|         | Applications:            | Pentostatin (2 mg/kg) in combination with cordycepin (2 mg/kg) was 100% effective in the T. evansi-infected mice. There was an increase in levels of some biochemical parameters, especially on liver enzymes, which were accompanied by histological lesions in the liver and kidneys. Pentostatin individually showed no curative effect on infected groups   |
|         | 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.Boyd-Tressler AM,Lane GS, et al. "Up-regulated Ectonucleotidases inFas-Associated Death Domain Protein- and Receptor-Interacting Protein Kinase1-Deficient Jurkat Leukemia Cells Counteract Extracellular ATP/AMP Accumulationvia Pannexin-1 Channels during Chemotherapeutic Drug-Induced Apoptosis." MolPharmacol. 2017 Jul;92(1):30-47.PMID:28461585

See more customer validations on [www.apexbt.com](http://www.apexbt.com).

## References

- [1]. Aldinucci D, Poletto D, Zagonel V, et al. In vitro and in vivo effects of 2' - deoxycoformycin (Pentostatin) on tumour cells from human  $\gamma\delta$ + T - cell malignancies[J]. British journal of haematology, 2000, 110(1): 188-196.
- [2]. Dalla Rosa L, Da Silva A S, Gressler L T, et al. Cordycepin (3'-deoxyadenosine) pentostatin (deoxycoformycin) combination treatmaent of mice experimentally infected with Trypanosoma evansi[J]. Parasitology, 2013, 140(5): 663-671.

## 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

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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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