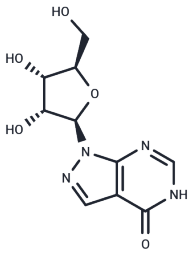
# Data Sheet (Cat.No.T13539)

TargetMol

## Allopurinol riboside

### Chemical Properties



CAS No. : 16220-07-8

Formula: C10H12N4O5

Molecular Weight: 268.23

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

### Biological Description

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|---|---|
| Description | Allopurinol riboside is a metabolite of allopurinol with potency against parasites. Allopurinol riboside competitively inhibits the action of purine nucleoside phosphorylase on inosine with a Ki of 277 μM. |
| Targets(IC50) | Endogenous Metabolite,Parasite,Drug Metabolite |
| In vitro | Allopurinol riboside is effective against parasites including leishmaniasis and American trypanosomiasis. Allopurinol riboside is selectively toxic because it is not metabolized by the corresponding enzymes in humans[1]. Humoral immunity is not suppressed by Allopurinol riboside. Lymphocyte blastogenesis induced by PHA and Con A is significantly suppressed by Allopurinol riboside in a concentration-dependent manner [2]. |
| In vivo | Low levels of Allopurinol riboside in plasma are attributable to incomplete absorption and rapid renal clearance. Probenecid reduces the renal clearance of allopurinol riboside, extends the half-life of allopurinol riboside in plasma, and triples the levels of allopurinol riboside in plasma[3]. Allopurinol riboside peaks in plasma 1.6 hours after administration, has an elimination half-life of 3 h, and has steady-state concentrations in the therapeutic range[4]. |

### Solubility Information

| | |
|---|---|
| Solubility | DMSO: 95 mg/mL (354.17 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |
| In vivo Formulation | 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (12.3 mM),Sonication is recommended.<br>*Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.* |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 3.7281 mL | 18.6407 mL | 37.2814 mL |
| 5 mM | 0.7456 mL | 3.7281 mL | 7.4563 mL |
| 10 mM | 0.3728 mL | 1.8641 mL | 3.7281 mL |
| 50 mM | 0.0746 mL | 0.3728 mL | 0.7456 mL |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Pacher P, et al. Therapeutic effects of xanthine oxidase inhibitors: renaissance half a century after the discovery of allopurinol. Pharmacol Rev. 2006 Mar;58(1):87-114.
Nishida Y, et al. Inhibition of purine nucleoside phosphorylase activity and of T-cell function with allopurinol-riboside. Agents Actions. 1979 Dec;9(5-6):549-52.
Were JB, et al. Effects of probenecid on the pharmacokinetics of allopurinol riboside. Antimicrob Agents Chemother. 1993 May;37(5):1193-6.
Shapiro TA, et al. Pharmacokinetics and metabolism of allopurinol riboside. Clin Pharmacol Ther. 1991 May;49(5):506-14.





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