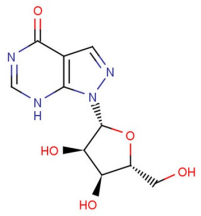
Data Sheet (Cat.No.T13539)

TargetMol
A DRUG SCREENING EXPERT

Allopurinol riboside

Chemical Properties



CAS No.:	16220-07-8
Formula:	C10H12N4O5
Molecular Weight:	268.23
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Allopurinol riboside is a metabolite of allopurinol and shows effective activities against parasites.
Targets(IC_{50})	Human Endogenous Metabolite: None
In vitro	Allopurinol-riboside competitively inhibits the action of purine nucleoside phosphorylase on inosine(Ki: 277 μM). Lymphocyte blastogenesis induced by PHA and Con A is significantly suppressed by allopurinol-riboside in a concentration-dependent manner. When LPS is used as a mitogen, the inhibition of allopurinol-riboside on lymphocyte proliferation is less marked. Humoral immunity is not suppressed by allopurinol-riboside [1]. Allopurinol riboside is an experimental agent for the treatment of leishmaniasis and American trypanosomiasis. Allopurinol riboside is effective against parasites because a series of enzymes (analogous to those that mediate purine salvage in humans) convert it into 4-aminopyrazolopyrimidine ribonucleoside triphosphate, a cytotoxic product [2].
In vivo	After oral administration, unexpectedly 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 [4]. Allopurinol riboside peaks in plasma 1.6 hours after administration, has an elimination half-life of 3 hours, and steady-state concentrations in the therapeutic range [3].

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.728 mL	18.641 mL	37.281 mL
5 mM	0.746 mL	3.728 mL	7.456 mL
10 mM	0.373 mL	1.864 mL	3.728 mL
50 mM	0.075 mL	0.373 mL	0.746 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. 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.
2. 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.
3. Shapiro TA, et al. Pharmacokinetics and metabolism of allopurinol riboside. Clin Pharmacol Ther. 1991 May;49(5):506-14.
4. Were JB, et al. Effects of probenecid on the pharmacokinetics of allopurinol riboside. Antimicrob Agents Chemother. 1993 May;37(5):1193-6.

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