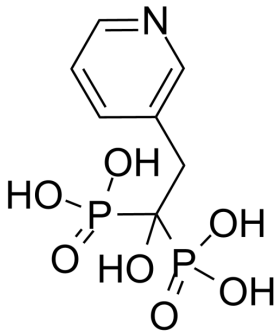
Risedronic acid



Cat. No.:	HY-B0148		
CAS No.:	105462-24-6		
Molecular Formula:	$C_7H_{11}NO_7P_2$		
Molecular Weight:	283.11		
Target:	Others		
Pathway:	Others		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year

SOLVENT & SOLUBILITY

In Vitro

0.1 M NaOH : 11 mg/mL (38.85 mM; ultrasonic and adjust pH to 7 with NaOH)
H_2O : 0.67 mg/mL (2.37 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.5322 mL	17.6610 mL	35.3220 mL
5 mM	0.7064 mL	3.5322 mL	7.0644 mL
10 mM	0.3532 mL	1.7661 mL	3.5322 mL

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

BIOLOGICAL ACTIVITY

Description

Risedronic acid (Risedronate) is a pyridinyl biphosphonate which inhibits osteoclast-mediated bone resorption.Target: OthersRisedronate, which was promoted in Croatia a few months ago, is the latest (III) generation of bisphosphonates, the most efficient anti-resorption drugs that inhibit osteoclast-mediated bone resorption and change the bone metabolism. Risedronate is hence the first line of bisphosphonates for the reduction of vertebral and non-vertebral fracture risks in postmenopausal women with osteoporosis or those with a high risk of osteoporosis. It also efficiently prevents bone loss or improves bone density in men and women on a long-term corticosteroid therapy .The administration of 20 and 25 mg/kg risedronate for 4 days led to decreases of parasitemia of 68.9% and 83.6%, respectively. On the seventh day of treatment the inhibitions were 63% and 88.9% with 20 and 25 mg/kg, respectively. After recovering the parasitemia, a dose-response curve was obtained for estimating the ID50 (dose causing 50% inhibition), equivalent to 17 ± 1.8 mg/kg after 7 days of treatment. Four days after the interruption of treatment (11 days postinfection), the parasitemias of the groups treated with 10, 15, 20, and 25 mg/kg/day were 15.3%, 15.9%, 15.2%, and 5.7%, respectively. Conversely, the group that received PBS presented parasitemia of 25.6%. Among the groups treated with risedronate, only the animals that received 25 mg/kg had a significant inhibition of 77.8% (see Table S1 in the supplemental material), demonstrating that even after treatment discontinuation, the parasitemia of the animals remained low in relation to that of the controls .

CUSTOMER VALIDATION

- Respir Res. 2022 Dec 28;23(1):380.

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REFERENCES

[1]. Giljevic Z, et al. Treatment of osteoporosis by risedronate-- speed, efficacy and safety. Reumatizam. 2006;53(2):66-71.

[2]. Jordao FM, et al. In vitro and in vivo antiplasmodial activities of risedronate and its interference with protein prenylation in Plasmodium falciparum. Antimicrob Agents Chemother. 2011 May;55(5):2026-31.

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