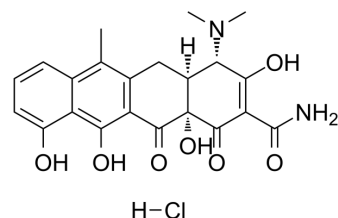


Anhydrotetracycline hydrochloride

Cat. No.:	HY-118660
CAS No.:	13803-65-1
Molecular Formula:	C ₂₂ H ₂₃ ClN ₂ O ₇
Molecular Weight:	462.88
Target:	Antibiotic; Bacterial
Pathway:	Anti-infection
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 20.83 mg/mL (45.00 mM); ultrasonic and warming and heat to 80°C					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		2.1604 mL	10.8019 mL	21.6039 mL
		5 mM		0.4321 mL	2.1604 mL	4.3208 mL
10 mM		0.2160 mL	1.0802 mL	2.1604 mL		
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: 2.08 mg/mL (4.49 mM); Suspended solution; Need ultrasonic					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (4.49 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	Anhydrotetracycline hydrochloride, a tetracycline biosynthetic precursor, is a potent competitive broad-spectrum tetracycline destructase enzymes inhibitor. Anhydrotetracycline hydrochloride is an effector for tetracycline controlled gene expression systems in eukaryotic cells ^[1] .
In Vitro	Anhydrotetracycline hydrochloride inhibits Tet(50) (IC ₅₀ =210 μM), Tet(X) (IC ₅₀ =41 μM), Tet(X) ₃ (IC ₅₀ =3 μM) degradations of tetracyclines. Anhydrotetracycline hydrochloride inhibits Tet(50) (IC ₅₀ =210 μM), Tet(X) (IC ₅₀ =75 μM), Tet(X) ₃ (IC ₅₀ =26 μM) degradations of chlortetracycline. Anhydrotetracycline hydrochloride inhibits Tet(50) (IC ₅₀ =120 μM), Tet(X) (IC ₅₀ =41 μM), Tet(X) ₃ (IC ₅₀ =7 μM) degradations of demeclocycline ^[1] . Anhydrotetracycline hydrochloride inhibits Tet(50) (IC ₅₀ =210 μM), Tet(X) (IC ₅₀ =41 μM), Tet(X) ₃ (IC ₅₀ =3 μM) degradations of tetracyclines. Anhydrotetracycline hydrochloride inhibits Tet(50) (IC ₅₀ =210 μM), Tet(X) (IC ₅₀ =75 μM), Tet(X) ₃ (IC ₅₀ =26 μM) degradations of chlortetracycline. Anhydrotetracycline hydrochloride inhibits Tet(50) (IC ₅₀ =120 μM), Tet(X) (IC ₅₀ =41 μM),

Tet(X)_3 (IC₅₀=7 μM) degradations of demeclocycline^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Jana L Markley, et al. Semisynthetic Analogues of Anhydrotetracycline as Inhibitors of Tetracycline Destructase Enzymes. ACS Infect Dis. 2019 Apr 12;5(4):618-633.

Caution: Product has not been fully validated for medical applications. For research use only.

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