

## Tetrahydrocortisol

## Chemical Properties

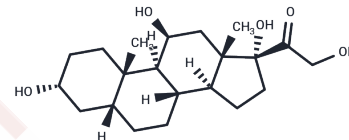
CAS No. : 53-02-1

Formula: C<sub>21</sub>H<sub>34</sub>O<sub>5</sub>

Molecular Weight: 366.49

Storage: Store at low temperature, Keep away from moisture  
Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Tetrahydrocortisol (Tetrahydrohydrocortisone) is a metabolite of neurosteroids and cortisol, a GABAA receptor antagonist, and also capable of lowering intraocular pressure.
Targets(IC50)	GABA Receptor, Endogenous Metabolite
In vitro	Tetrahydrocortisol dose-dependently inhibited Dexamethasone (10 <sup>-7</sup> M)-induced actin network formation in human trabecular meshwork cells (IC <sub>50</sub> = 5.7 × 10 <sup>-7</sup> M; up to 14 days), and partially reversed microtubule changes, indicating cytoskeletal modulation [1].

## Solubility Information

Solubility	DMSO: 40 mg/mL (109.14 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 1 mg/mL (2.73 mM), Sonication is recommended. <i>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.</i>

### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	2.7286 mL	13.6429 mL	27.2859 mL
5 mM	0.5457 mL	2.7286 mL	5.4572 mL
10 mM	0.2729 mL	1.3643 mL	2.7286 mL
50 mM	0.0546 mL	0.2729 mL	0.5457 mL

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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

Clark AF, Lane D, Wilson K, Miggins ST, McCartney MD. Inhibition of dexamethasone-induced cytoskeletal changes in cultured human trabecular meshwork cells by tetrahydrocortisol. Invest Ophthalmol Vis Sci. 1996 Apr;37(5):805-13.

Webster SP, et al. Selection and early clinical evaluation of the brain-penetrant 11 $\beta$ -hydroxysteroid dehydrogenase type 1 (11 $\beta$ -HSD1) inhibitor UE2343 (Xanamem™). Br J Pharmacol. 2017 Mar;174(5):396-408.

Turpeinen U, et al. Determination of free tetrahydrocortisol and tetrahydrocortisone ratio in urine by liquid chromatography-tandem mass spectrometry. Scand J Clin Lab Invest. 2006;66(2):147-59.

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