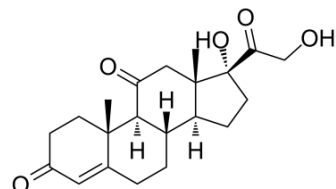


## Cortisone

|                           |  |       |          |
|---------------------------|--|-------|----------|
| <b>Cat. No.:</b>          | HY-17461                                       |       |          |
| <b>CAS No.:</b>           | 53-06-5  |       |          |
| <b>Molecular Formula:</b> | C <sub>21</sub> H <sub>28</sub> O <sub>5</sub> |       |          |
| <b>Molecular Weight:</b>  | 360.44   |       |          |
| <b>Target:</b>            | Glucocorticoid Receptor; Endogenous Metabolite |       |          |
| <b>Pathway:</b>           | GPCR/G Protein; Metabolic Enzyme/Protease      |       |          |
| <b>Storage:</b>           | Powder   | -20°C | 3 years  |
|                           |  | 4°C   | 2 years  |
|                           | In solvent                                     | -80°C | 6 months |
|                           |  | -20°C | 1 month  |



### SOLVENT & SOLUBILITY

|   |  |                          |           |           |            |            |
|---|--|--------------------------|-----------|-----------|------------|------------|
| <b>In Vitro</b>   | DMSO : 100 mg/mL (277.44 mM; Need ultrasonic)  |                          |           |           |            |            |
|   |  | Solvent<br>Concentration | Mass      | 1 mg      | 5 mg       | 10 mg      |
|   | <b>Preparing Stock Solutions</b>   | 1 mM                     |           | 2.7744 mL | 13.8719 mL | 27.7439 mL |
|   |  | 5 mM                     |           | 0.5549 mL | 2.7744 mL  | 5.5488 mL  |
| 10 mM   |  |                          | 0.2774 mL | 1.3872 mL | 2.7744 mL  |            |
| Please refer to the solubility information to select the appropriate solvent. |  |                          |           |           |            |            |
| <b>In Vivo</b>  | <ol style="list-style-type: none"> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline<br/>Solubility: ≥ 2.5 mg/mL (6.94 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline)<br/>Solubility: ≥ 2.5 mg/mL (6.94 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil<br/>Solubility: ≥ 2.5 mg/mL (6.94 mM); Clear solution</li> </ol> |                          |           |           |            |            |

### BIOLOGICAL ACTIVITY

|                                     |   |
|-------------------------------------|---|
| <b>Description</b>                  | Cortisone (17-Hydroxy-11-dehydrocorticosterone), an oxidized metabolite of Cortisol (a Glucocorticoid). Cortisone acts as an immunosuppressant and anti-inflammatory agent. Cortisone can partially intervene in binding of Glucocorticoid to Glucocorticoid-receptor at high concentrations <sup>[1][3][4]</sup> . |
| <b>IC<sub>50</sub> &amp; Target</b> | Human Endogenous Metabolite   |
| <b>In Vitro</b>                     | Cortisone (2.8-28,000 nM) dose-dependently attenuates the apoptosis induced by Cortisol in peripheral-blood mononuclear   |

cells (PBMCs)<sup>[1]</sup>.

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

#### In Vivo

Cortisone (2 mg/kg; i.m. on alternate days for 2 months) decreases the BCG (the vaccine strain of tubercle bacillus) lesions and tuberculin reactions in rabbits<sup>[2]</sup>.

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

|                 |   |
|-----------------|---|
| Animal Model:   | Male New Zealand white rabbits (2.1-2.4 kg) were injected with BCG at six days after the first administration <sup>[2]</sup>  |
| Dosage:         | 2 mg/kg   |
| Administration: | Intramuscular injection on alternate days for 2 months  |
| Result:         | Reduced the BCG lesions and tuberculin reactions.<br>Reduced the number of infiltrating mononuclear cells (MN), the amount of caseous necrosis and ulceration, and the percent of NM that were beta-galactosidase-positive. |

## CUSTOMER VALIDATION

- Drug Test Anal. 2020 Aug 27.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

- [1]. Hirano T, et, al. Cortisone counteracts apoptosis-inducing effect of cortisol in human peripheral-blood mononuclear cells. *Int Immunopharmacol*. 2001 Nov;1(12):2109-15.
- [2]. McCue RE, et, al. The effect of cortisone on the accumulation, activation, and necrosis of macrophages in tuberculous lesions. *Inflammation*. 1978 Jun;3(2):159-76.
- [3]. Seleem D, et, al. In Vivo Antifungal Activity of Monolaurin against *Candida albicans* Biofilms. *Biol Pharm Bull*. 2018;41(8):1299-1302.
- [4]. Rusu VM, et, al. In vivo effects of cortisone on the B cell line in chickens. *J Immunol*. 1975 Nov;115(5):1370-4.

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

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