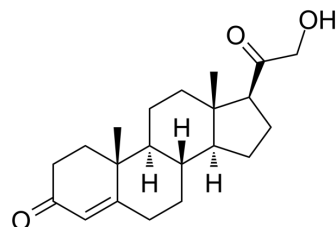


Deoxycorticosterone

Cat. No.:	HY-113414		
CAS No.:	64-85-7		
Molecular Formula:	C ₂₁ H ₃₀ O ₃		
Molecular Weight:	330.46		
Target:	Endogenous Metabolite; Mineralocorticoid Receptor		
Pathway:	Metabolic Enzyme/Protease; Vitamin D Related/Nuclear Receptor		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 250 mg/mL (756.52 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	3.0261 mL	15.1304 mL	30.2609 mL
	5 mM	0.6052 mL	3.0261 mL	6.0522 mL
	10 mM	0.3026 mL	1.5130 mL	3.0261 mL

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

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
 Solubility: ≥ 2.5 mg/mL (7.57 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: ≥ 2.5 mg/mL (7.57 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
 Solubility: ≥ 2.5 mg/mL (7.57 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Deoxycorticosterone is a steroid hormone produced by the adrenal gland that possesses mineralocorticoid activity and acts as an aldosterone precursor. Deoxycorticosterone is an agonist for O. mykiss mineralocorticoid receptor (rtMR) transcription with EC₅₀ of 0.16 nM^[3]. Deoxycorticosterone could acts as an immune stimulator in fish^[4].

IC₅₀ & Target

Human Endogenous Metabolite	rtMR 0.16 nM (EC50)
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In Vitro	Deoxycorticosterone enhances the rtMR transcriptional activity, involves in the milt fluidity regulation ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.								
In Vivo	Deoxycorticosterone (0.08 mg/kg, i.p, single dosage) increases expressions of C-type lysozyme and apolipoprotein A1 in spleen and gills, which indicates an immune stimulatory effect in Eurasian perch ^[4] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.								
	<table border="1"> <tr> <td>Animal Model:</td> <td>Eurasian perch^[4]</td> </tr> <tr> <td>Dosage:</td> <td>0.08 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>i.p.</td> </tr> <tr> <td>Result:</td> <td>Upregulated mRNA expression of genes coding for 11β-HSD2 and MR in spleen. Unregulated expressions of C type lysozyme mRNA in spleen and Apo A1 mRNA in spleen and gills.</td> </tr> </table>	Animal Model:	Eurasian perch ^[4]	Dosage:	0.08 mg/kg	Administration:	i.p.	Result:	Upregulated mRNA expression of genes coding for 11 β -HSD2 and MR in spleen. Unregulated expressions of C type lysozyme mRNA in spleen and Apo A1 mRNA in spleen and gills.
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CUSTOMER VALIDATION

- Proc Natl Acad Sci U S A. 2022 Apr 12;119(15):e2117004119.
- FASEB J. 2023 Apr;37(4):e22869.

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REFERENCES

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- [2]. Sturm A, et al., 11-deoxycorticosterone is a potent agonist of the rainbow trout (*Oncorhynchus mykiss*) mineralocorticoid receptor. *Endocrinology*. 2005 Jan;146(1):47-55.
- [3]. Mathieu C, et al., First evidence of the possible implication of the 11-deoxycorticosterone (DOC) in immune activity of Eurasian perch (*Perca fluviatilis*, L.): comparison with cortisol. *Comp Biochem Physiol A Mol Integr Physiol*. 2013 Jun;165(2):149-58.
- [4]. KAGAWA CM, et al. Action of new steroids in blocking effects of aldosterone and desoxycorticosterone on salt. *Science*. 1957 Nov 15;126(3281):1015-6.

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

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