# 17α-Hydroxyprogesterone-$d_8$

**Cat. No.:** HY-B0891S

**CAS No.:** 850023-80-2

**Molecular Formula:** $C_{21}H_{22}D_8O_3$

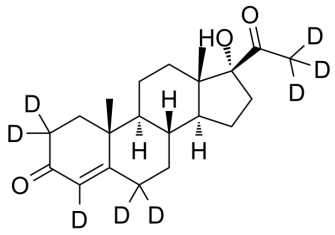
**Molecular Weight:** 338.51

**Target:** Progesterone Receptor; Endogenous Metabolite

**Pathway:** Vitamin D Related/Nuclear Receptor; Metabolic Enzyme/Protease

**Storage:**

| | | |
|---|---|---|
| Powder | -20°C | 3 years |
| In solvent | -80°C | 6 months |
| | -20°C | 1 month |



## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 50 mg/mL (147.71 mM; Need ultrasonic)
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H2O : ≥ 0.1 mg/mL (0.30 mM)
* "≥" means soluble, but saturation unknown.

**Preparing Stock Solutions**

| Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|
| 1 mM | 2.9541 mL | 14.7706 mL | 29.5412 mL |
| 5 mM | 0.5908 mL | 2.9541 mL | 5.9082 mL |
| 10 mM | 0.2954 mL | 1.4771 mL | 2.9541 mL |

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

**In Vivo**

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1.25 mg/mL (3.69 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1.25 mg/mL (3.69 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

17α-Hydroxyprogesterone-$d_8$ is the deuterium labeled 17α-Hydroxyprogesterone. 17α-Hydroxyprogesterone (17-Hydroxyprogesterone) is an endogenous progestogen as well as chemical intermediate in the biosynthesis of other steroid hormones, including the corticosteroids and the androgens and the estrogens.

**In Vitro**

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1].

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

## REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.



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