

# Androsterone

**Catalog No: tcsc0014230**



## Available Sizes

**Size:** 100mg

**Size:** 250mg



## Specifications

**CAS No:**

53-41-8

**Formula:**

$C_{19}H_{30}O_2$

**Pathway:**

Metabolic Enzyme/Protease;Metabolic Enzyme/Protease

**Target:**

FXR;Endogenous Metabolite

**Purity / Grade:**

>98%

**Solubility:**

10 mM in DMSO

**Alternative Names:**

5 $\alpha$ -Androstan-3 $\alpha$ -ol-17-one

**Observed Molecular Weight:**

290.44

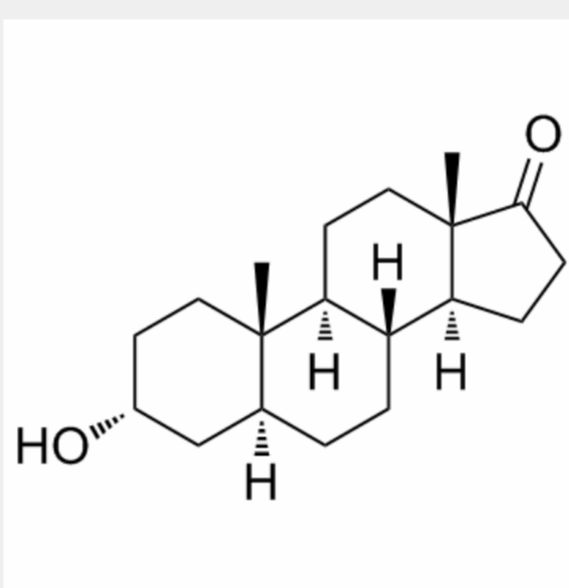
## Product Description

Androsterone is a metabolic product of testosterone and can activate **Farnesoid X Receptor (FXR)**.

IC50 & Target: FXR<sup>[1]</sup>

**In Vitro:** Androsterone activates both the mFXR-LBD and the hFXR-LBD, with Androsterone activating the mFXR-LBD more strongly than the hFXR-LBD. Furthermore, cotransfection studies with gal4-hFXR-LBD and SRC-1/VP16 expression plasmids demonstrate that Androsterone potentiates the interaction of SRC-1 with the hFXR-LBD. Several amino acid changes including H294S, S332V, R351H, and Y361F significantly reduce Androsterone activation<sup>[1]</sup>. Androsterone (5 $\alpha$ , 3 $\alpha$ -A) (10 to 100  $\mu$ M) also inhibits epileptiform discharges in a concentration-dependent fashion in the *in vitro* slice model<sup>[2]</sup>.

**In Vivo:** Androsterone treatment results in a significant induction of small heterodimer partner (SHP), suggesting Androsterone may activate endogenous FXR<sup>[1]</sup>. Intraperitoneal injection of Androsterone (5 $\alpha$ , 3 $\alpha$ -A) protects mice in a dose-dependent fashion from seizures in the following models (ED<sub>50</sub> dose in mg/kg protecting 50% of animals): 6 Hz electrical stimulation (29.1), pentylenetetrazol (43.5), pilocarpine (105), 4-AP (215), and maximal electroshock (224)<sup>[2]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!