

Product Data Sheet

Product Name: Boldenone Undecylenate

Cat. No.: GC35541

Chemical Properties

Cas. No. 13103-34-9

SMILES O=C1C=C[C@@]2(C)C(CC[C@]3([H])[C@]2([H])CC[C@@]4(C)[C@@]3([H])CC[C@@H]4OC(CCCCCCCC=C)=O)=C1

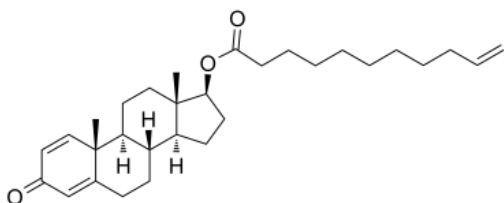
Formula $C_{30}H_{44}O_3$ M.Wt 452.67

Solubility Ethanol: 100 mg/mL (220.91 mM);
 DMSO: ≥ 41 mg/mL (90.57 mM);
 Water: < 0.1 mg/mL (insoluble)

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Protocol

Animal experiment [1]:

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Animal models	Male Wistar rats
Preparation Method	Male Wistar rats (three-month-old; 166.34±2.32g) were raised in controlled environmental conditions (22±2°C; 12h light/dark cycle) with food and water ad libitum. The rats were randomly divided into 3 groups (8 per group). Group I (control group) was orally given physiological saline. Group II (vehicle control group) was intramuscularly injected with 0.25ml/kg sesame oil as a vehicle once a week for eight weeks. Group III (Boldenone Undecylenate-treated group) was intramuscularly injected with Boldenone Undecylenate (5mg/kg) once a week for eight weeks. At the end of the experiment (after eight weeks), twenty-four hours after the last administration, rats were weighed and then euthanized under anesthesia. Immediately after euthanasia, testes were dissected out and analyzed.
Dosage form	5mg/kg/week; 8 weeks; i.m.
Applications	Boldenone Undecylenate treatment induced the appearance of tubular degeneration and atrophy in the testes of rats, with maturation arrest, accompanied by obvious degenerative changes and necrosis.
References:[1] Behairy A, El-Sharkawy N I, Saber T M, et al. The modulatory role of vitamin C in boldenone undecylenate induced testicular oxidative damage and androgen receptor dysregulation in adult male rats[J]. Antioxidants, 2020, 9(11): 1053.	

Background

Boldenone Undecylenate is a synthetic derivative of testosterone that increases the growth and nutrient conversion of food-producing animals^[1]. Boldenone Undecylenate enhances physical performance and muscle size by elevating positive nitrogen balance via promoting protein anabolism and decreasing protein catabolism, as well as water, nitrogen, and electrolyte retention^[2]. Boldenone Undecylenate is commonly employed as an internal standard to optimize the parameters of liquid

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chromatography-tandem mass spectrometry for the efficient identification of steroids in bovine serum^[3]. Boldenone Undecylenate has been widely used to promote the growth of male rabbits and to alter testosterone levels^[4].

In vivo, Boldenone Undecylenate treatment via intramuscular injection at a dose of 5mg/kg once weekly for 8 weeks induced testicular oxidative damage and androgen receptor dysregulation in adult male rats^[5]. Intramuscular injection of Boldenone Undecylenate at a dose of 5mg/kg once weekly for 8 weeks promoted kidney and liver injury, led to a significant increase in Hsp90 content, and caused dysregulation of androgen receptor expression in male Wistar rats^[6]. Intramuscular injection of Boldenone Undecylenate at a dose of 5mg/kg/week for 8 consecutive weeks elicited autoimmune clinical hypothyroidism and caused pathological changes in the thymus and spleen tissues in rats^[7].

References:

- [1] Oda S S, El-Ashmawy I M. Adverse effects of the anabolic steroid, boldenone undecylenate, on reproductive functions of male rabbits[J]. International journal of experimental pathology, 2012, 93(3): 172-178.
- [2] Hassan H, Mabrouk E A, Youssef M, et al. Mitigating effects of ginseng bulk on hepatic and immunological toxicity induced by boldenone undecylenate in rats[J]. Journal of Advanced Veterinary Research, 2025, 15(2): 233-237.
- [3] Rocha D G, Lana M A G, de Assis D C S, et al. Determination of steroids in bovine serum: validation of a reliable LC-MS/MS method and in vivo studies with boldenone undecylenate and testosterone propionate[J]. Journal of agricultural and food chemistry, 2020, 68(41): 11545-11552.
- [4] Ghazy E J, Elballal S S. Effect of the anabolic steroid, boldenone undecylenate on reproductive performance of male rabbits[J]. J. Reprod. Infertil, 2010, 50: 8-17.
- [5] Behairy A, El-Sharkawy N I, Saber T M, et al. The modulatory role of vitamin C in boldenone undecylenate induced testicular oxidative damage and androgen receptor dysregulation in adult male rats[J]. Antioxidants, 2020, 9(11): 1053.
- [6] Behairy A, Mohamed W A M, Ebraheim L L M, et al. Boldenone undecylenate-mediated hepatorenal impairment by oxidative damage and dysregulation of heat shock protein 90 and androgen receptors expressions: vitamin C preventive role[J]. Frontiers in Pharmacology, 2021, 12: 651497.
- [7] El Deib M M, El-Sharkawy N I, Beheiry R R, et al. Boldenone undecylenate disrupts the immune system and induces autoimmune clinical hypothyroidism in rats: Vitamin C ameliorative effects[J].

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International Immunopharmacology, 2021, 99: 107939.

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