DROSTANOLONE PROPIONATE

PRODUCT OVERVIEW

Specification	Details
Generic Name	Drostanolone Propionate
Drug Class	Anabolic Androgenic Steroid (AAS)
Active Ingredient	Drostanolone Propionate
Chemical Formula	$C_{23}H_{36}O_3$
Molecular Weight	360.53 g/mol
Administration Route	Intramuscular Injection
Ester Type	Short-Acting Drostanolone Ester
Approximate Half-Life	Approximately 2–3 Days
Release Profile	Rapid Release
Bioavailability	High After Intramuscular Administration
Primary Medical Use	Previously investigated for the treatment of selected breast cancers; currently limited clinical use in most countries

INTRODUCTION

Drostanolone Propionate is a short-acting esterified form of drostanolone developed to provide rapid hormone availability following intramuscular administration.Drostanolone is a synthetic anabolic androgenic steroid structurally derived from dihydrotestosterone (DHT). Unlike testosterone, drostanolone cannot undergo aromatization to estrogen and exhibits pharmacological characteristics associated with DHT-derived compounds.The propionate ester allows rapid absorption from the intramuscular depot, resulting in early release of active drostanolone into systemic circulation.Compared with longer ester formulations, Drostanolone Propionate provides faster pharmacokinetic activity and earlier attainment of circulating hormone concentrations.Its pharmacological profile has made Drostanolone Propionate one of the most recognized DHT-derived anabolic steroids in both clinical investigation and endocrine pharmacology.

HISTORY

Drostanolone was developed during pharmaceutical research investigating dihydrotestosterone derivatives with improved anabolic properties and reduced estrogenic activity.

Esterification with propionic acid produced Drostanolone Propionate, providing rapid absorption following intramuscular administration.

Historically, Drostanolone Propionate was investigated and utilized in selected medical settings, particularly in the treatment of certain forms of breast cancer before the introduction of newer therapeutic options.

Scientific investigation of drostanolone has contributed significantly to advances in:

* Dihydrotestosterone pharmacology
* Anabolic steroid chemistry
* Hormone-dependent cancer research
* Endocrine physiology

CHEMICAL STRUCTURE

Drostanolone Propionate consists of the drostanolone molecule esterified with propionic acid at the 17-beta hydroxyl position.

The propionate ester primarily modifies pharmacokinetic behavior without altering the biological activity of drostanolone after enzymatic hydrolysis.

The propionate ester primarily influences:
* Absorption rate
* Release duration
* Plasma availability
* Pharmacokinetic characteristics

Following enzymatic cleavage of the ester bond, biologically active drostanolone becomes available to interact with androgen receptors throughout the body.

CHEMICAL PROFILE

Parameter	Information
Chemical Name	Drostanolone Propionate
Molecular Formula	$C_{23}H_{36}O_3$
Molecular Weight	360.53 g/mol
Hormone Classification	Anabolic Androgenic Steroid
Ester Group	Propionate
Active Hormone	Drostanolone

PHARMACOLOGY

Following intramuscular administration, Drostanolone Propionate forms a short-duration depot within muscle tissue.

The propionate ester undergoes rapid enzymatic hydrolysis, releasing free drostanolone into systemic circulation.

Once released, drostanolone binds to androgen receptors located throughout multiple tissues including:

* Skeletal muscle
* Bone
* Bone marrow
* Connective tissue
* Skin
* Liver
* Reproductive tissues

Unlike testosterone and boldenone, drostanolone is a dihydrotestosterone derivative and is not aromatized into estradiol.

Conversion Pathway	Enzyme	Product
Drostanolone → Hepatic Metabolites	Hepatic Enzymes	Inactive Metabolites
Aromatization	Aromatase	No Significant Conversion

MECHANISM OF ACTION

Drostanolone produces its biological effects primarily through activation of intracellular androgen receptors.

The biological process includes:

* Drostanolone enters target cells.
* Drostanolone binds to androgen receptors.
* The receptor-hormone complex becomes activated.
* The activated complex translocates into the cell nucleus.
* Interaction with androgen response elements occurs on DNA.
* Gene transcription is regulated.
* Cellular protein synthesis and tissue-specific physiological responses are influenced.

Activation of androgen receptors contributes to:

* Protein synthesis
* Nitrogen retention
* Muscle tissue maintenance
* Bone remodeling
* Red blood cell production
* Connective tissue physiology
* Endocrine regulation

PHARMACODYNAMICS

Drostanolone Propionate affects multiple physiological systems through androgen receptor signaling.

SKELETAL MUSCLE SYSTEM

Drostanolone contributes to normal muscle physiology through:

* Regulation of protein metabolism
* Support of muscle tissue maintenance
* Influence on nitrogen balance
* Regulation of muscle cell function

Drostanolone interacts with androgen receptors, contributing to anabolic activity in androgen-responsive tissues.

SKELETAL SYSTEM

Drostanolone contributes to skeletal physiology by influencing:

* Bone remodeling
* Osteoblast activity
* Skeletal maintenance
* Bone mineral metabolism

CONNECTIVE TISSUE

Drostanolone contributes to connective tissue physiology by influencing:

* Structural protein metabolism
* Connective tissue maintenance
* Tissue remodeling
* Collagen metabolism

REPRODUCTIVE SYSTEM

Drostanolone interacts with androgen-sensitive tissues and contributes to:

* Hormonal regulation
* Maintenance of androgen-responsive tissues
* Endocrine signaling
* Reproductive physiology

PHARMACOKINETICS

Following intramuscular administration, Drostanolone Propionate forms a short-duration depot within muscle tissue.

The propionate ester undergoes rapid enzymatic hydrolysis, releasing active drostanolone into systemic circulation.

Compared with longer ester formulations, Drostanolone Propionate provides faster hormone availability, earlier peak plasma concentrations, and a shorter duration of biological activity.

PHARMACOKINETIC PROFILE

Parameter	Description
Ester Type	**Short-Acting Drostanolone Ester**
Absorption	**Rapid release from intramuscular depot**
Release Pattern	**Rapid and controlled release**
Half-Life	**Approximately 2–3 Days**
Duration of Activity	**Short-Acting**
Plasma Stability	**Moderate**
Protein Binding	**High**
Metabolism	**Primarily hepatic**
Active Hormone	**Drostanolone**
Elimination	**Urinary excretion of metabolites**

PHYSIOLOGICAL EFFECTS

Normal drostanolone activity contributes to:

Muscle Function
* Protein synthesis
* Nitrogen retention
* Maintenance of lean body tissue
* Muscle physiology

Bone Health
* Bone remodeling
* Skeletal maintenance
* Bone metabolism

Connective Tissue
* Structural protein metabolism
* Connective tissue maintenance
* Tissue remodeling

General Physiology
* Protein metabolism
* Hormonal regulation
* Endocrine function

CLINICAL APPLICATIONS

Drostanolone Propionate has previously been investigated for selected medical applications, particularly hormone-responsive breast cancer, and has also contributed to experimental endocrine research.

Clinical evaluation may include:

* Medical history
* Physical examination
* Laboratory assessment
* Individual pharmacological evaluation

Historical and investigational applications include:

* Hormone-responsive breast cancer
* Endocrine pharmacology
* Protein metabolism research
* Androgen receptor research

SAFETY CONSIDERATIONS

Drostanolone therapy requires individualized medical evaluation and regular monitoring.

Important considerations include:

* Cardiovascular health
* Blood parameters
* Endocrine function
* Liver and kidney function
* Lipid profile
* Individual physiological response

POTENTIAL ADVERSE EFFECTS

Possible adverse effects may include:

Endocrine Effects
* Suppression of endogenous testosterone production
* Hormonal imbalance
* Alterations in endocrine function

Dermatological Effects
* Acne
* Increased skin oil production
* Hair loss in genetically predisposed individuals

Cardiovascular Effects
* Changes in lipid profile
* Increased hematocrit
* Blood pressure alterations

Reproductive Effects
* Reduced fertility
* Suppression of spermatogenesis
* Hormonal suppression

CONTRAINDICATIONS

Condition	Reason
Prostate Cancer	**Potential androgen sensitivity**
Male Breast Cancer	**Hormone-sensitive condition**
Pregnancy	**Risk of fetal virilization**
Severe Cardiac, Hepatic or Renal Disease	**Requires specialist evaluation**
Known Hypersensitivity	**Risk of allergic reaction**

DRUG INTERACTIONS

Potential interactions may occur with:

Anticoagulants
Drostanolone may influence anticoagulant response and require monitoring.

Antidiabetic Medications
Changes in glucose metabolism may alter therapeutic requirements.

Corticosteroids
Combined administration may influence fluid balance and metabolic parameters.

Other Hormonal Therapies
Combined hormonal therapy requires professional medical supervision.

LABORATORY MONITORING

Laboratory Test	Purpose
CBC	**Assess blood parameters**
Hematocrit	**Monitor red blood cell concentration**
Hemoglobin	**Evaluate erythropoiesis**
Liver Function Tests	**Assess hepatic health**
Kidney Function Tests	**Evaluate renal function**
Lipid Profile	**Monitor cardiovascular risk markers**
Total Testosterone	**Evaluate endocrine status**

Estradiol (E2)	**Assess hormonal balance**
PSA (When Appropriate)	**Monitor prostate health**

STORAGE & STABILITY

* Store according to official product labeling.
* Protect from excessive heat and direct sunlight.
* Do not freeze.
* Maintain original packaging integrity.
* Keep away from children.
* Inspect packaging before use.

PRODUCT AUTHENTICITY

Every genuine NEXON product should include appropriate quality verification features.

Authentication may include:

* Batch number tracking
* Manufacturing information
* Expiration date verification
* QR authentication system
* Authorized distribution verification

NEXON emphasizes transparency, traceability, and product quality control.

FREQUENTLY ASKED QUESTIONS

What is Drostanolone Propionate?
Drostanolone Propionate is a short-acting esterified form of drostanolone designed to provide rapid hormone availability following intramuscular administration.

How is Drostanolone Propionate different from Drostanolone Enanthate?
Drostanolone Propionate provides faster absorption and a shorter duration of activity, whereas Drostanolone Enanthate provides slower release and prolonged hormone availability.

Does Drostanolone Propionate convert to estrogen?
No. Drostanolone is a dihydrotestosterone (DHT) derivative and is not considered a substrate for aromatase, therefore it does not undergo meaningful conversion to estradiol.

Why are drostanolone esters used?
Esterification modifies the pharmacokinetic profile of drostanolone by controlling hormone release and influencing the duration of biological activity.

Was Drostanolone Propionate used clinically?
Yes. Drostanolone Propionate was previously investigated and used in selected medical settings, particularly for certain hormone-responsive breast cancers, before newer treatment options became available.

NEXON QUALITY COMMITMENT

NEXON is committed to maintaining high standards of manufacturing quality, product consistency, traceability, and scientific transparency.

Through quality control systems, authentication procedures, and responsible information sharing, NEXON aims to provide reliable pharmaceutical products and educational resources for healthcare professionals and informed users.

SCIENTIFIC REFERENCES

*Kicman AT. Pharmacology of Anabolic Steroids.

* Basaria S. Androgen Abuse in Athletes: Detection and Consequences.

* Handelsman DJ. Androgen Physiology and Pharmacology.

* Shahidi NT. Chemistry, Biological Action and Clinical Applications of Anabolic-Androgenic Steroids.

* Llewellyn W. Anabolics.

* Evans NA. Current Concepts in Anabolic-Androgenic Steroids.

* Kochakian CD. Anabolic-Androgenic Steroids.

* Nieschlag E, Behre HM. Andrology: Male Reproductive Health and Dysfunction.

* Kicman AT, Gower DB. Anabolic Steroids in Sport and Exercise.

* Wilson JD. Androgen Physiology and Pharmacology.