# SARMs S4 & S22

## Como Compounding Pharmacy

**SARM S4 & S22 – Selective Androgen Receptor Modulator** **Purity:** 98% (HPLC on request)
**Molecular Formula :** C47H58N12O6 **Molecular Weight:** 877.05 **CAS No.:** 140703-51-1
**Sequence:** His-2-Me-D-Trp-Ala-Trp-D-Phe-Lys-NH2

## Description

Selective Androgen Receptor Modulators (SARMs) provide the benefits of traditional anabolic/androgenic steroids such as testosterone (including increased muscle mass, fat loss, and bone density), while having a lower tendency to produce the unwanted side effects of steroids (aromatization / increased DHT). By acting/stimulating on the androgen receptor, SARMs can provide a similar therapeutic outcome to androgen therapy without any increase in androgen levels. SARMs have the potential to take the place of the androgens, and therefore exert many of the same positive effects on muscle tissue as anabolic steroids like testosterone. SARMs can be administered in an injectable dosage form and are absorbed orally, but are not liver toxic like most oral steroids are. The anabolic effect has been measured to be roughly the same as testosterone. It has also been shown to produce dose-dependent increases in bone mineral density and mechanical strength in addition to being able decrease body fat and increase lean body mass.

## Protocol

**Content and Potency:** 10mL (2 x 5mL) at 2000mcg/ml ready-to-inject intramuscular.

**Suggested dosage:** 0.25ml (bilateral) once daily for 5 days out of 7, intramuscular **(**8 weeks supply).

**Transdermal Option:** Transdermal Option: 500mcg/mL x 40mL – Apply 1mL (bilateral) daily 5 days out of 7

## Clinical Research

**Selective Androgen Receptor Modulators (SARMs) as Function Promoting Therapies**

Shalender Bhasin, MD and Ravi Jasuja, PhD
Source: Endocrinology, Diabetes, and Nutrition, Boston Claude D. Pepper, Boston Uni, School of Medicine

**Purpose:** The last decade has witnessed unprecedented discovery effort to develop selective androgen receptor modulators (SARMs) that improve physical function and bone health without adversely affecting the prostate and cardiovascular outcomes. This review describes the historical evolution, the rationale for SARM development, and the mechanisms of testosterone action and SARM selectivity.

**Recent Findings:** While steroidal SARMs have been around since the 1940s, a number of nonsteroidal SARMs that do not serve as substrates for CYP19 aromatase or 5α-reductase, act as full agonists in muscle and bone and as partial agonists in prostate are in development. The differing interactions of steroidal and nonsteroidal compounds with AR contribute to their unique pharmacologic actions. Ligand binding induces specific conformational changes in the ligand binding domain, which could modulate surface topology and protein-protein interactions between AR and coregulators, resulting in tissue-specific gene regulation. Preclinical studies have demonstrated the ability of SARMs to increase muscle and bone mass in preclinical rodent models with varying degree of prostate sparing. Phase I trials of SARMs in humans have reported increments in fat-free mass.

**Summary:** SARMs hold promise as a new class of function promoting anabolic therapies for a number of clinical indications, including functional limitations associated with aging and chronic disease, frailty, cancer cachexia, and osteoporosis.

**A full copy of all trials are available from Como Compounding Pharmacy. Please contact us for more info.**