



## Kisspeptin

### About

Kisspeptin-10 is a peptide that activates the GPR54 receptor, a key regulator of the hypothalamic-pituitary-gonadal (HPG) axis. It's being studied for its role in stimulating reproductive hormone release and supporting fertility, sexual function, and hormonal balance

\*These products are for research use only and are not intended for human consumption, medical use, therapeutic use, or diagnostic purposes. They are not to be used in foods, drugs, cosmetics, dietary supplements, or any products intended for humans or animals. Peptides are not sterile, have not been tested for safety or efficacy in humans, and must not be injected, ingested, inhaled, applied to the skin, or administered in any form. No product sold is intended to treat, cure, mitigate, or prevent any disease.

## What's Included

- One vial, concentration: 5mg/4mL
- One vial will last 1 month

### Reconstitution kit

- 2 (20) 29-30G subq needles
- (1 ) 5mL syringe
- (1) 25G needle with syringe
- (1) 10mL bacteriostatic water

### Clinical Research Potential Benefits:

- May support reproductive hormone regulation and HPG axis function
- May enhance fertility in both men and women
- May aid in ovulation and testicular function
- May improve sexual health and neuroendocrine balance

### Clinical Research Suggested Use:

- Draw 8 units (100mcg) into the syringe
- Administer daily 2x a day, in the AM and PM
- Duration: 1-2 months
- Reconstitute: add 4mL bacteriostatic water to the to the lyophilized powder vial
- Injection type: subcutaneous injection

## Reconstitution & Administration\*

\*Instructions start on page 2



## Kisspeptin Reconstitution

One

Prepare

**STEP 1:** Remove plastic covers, clean vial and bacteriostatic water top with alcohol pad for 15 seconds

**STEP 2:** Using the large syringe from your administration kit, pull out 4mL of Bacteriostatic water

- It may take a few repetitions to load your syringe with the 4mL with no air pockets

**STEP 3:** Once you've loaded your syringe, slowly inject the 4mL of Bacteriostatic water into your Kisspeptin vial:

- On its side to not damage the bonds of the product
- Do not shake, gently swirl if needed
- Allow the solution to sit for at least 5 minutes

**\*Supplies:** 5 mL syringe (large), 25G needle, Bacteriostatic water, Kisspeptin vial, Alcohol pad

Two

Pull

**STEP 1:** With the smaller needle draw up 8 units of the Kisspeptin into the small syringe from your kit

**\*Supplies:** 29G-30G subcutaneous syringe with needle (small), Alcohol pad

Three

Inject

**STEP 1:** Clean the injection area with an alcohol pad

**STEP 2:** Inject subcutaneously (see pg 3)

- Repeat once in the AM and once in the PM daily.
- Duration: 1-2 months
- One vial will last one month



## Injection Steps

### Subcutaneous Injection steps:

#### 1 Choose & Clean the Injection Site

- Use the abdomen (3 inches from the belly button), thigh, or upper arm. Rotate sites to prevent irritation. Clean the area with an alcohol swab and let it dry.

#### 2 Inject

- Pinch 1 to 2 inches of skin, insert the needle at a 90° angle, and slowly push the plunger down.

#### 3 Remove the Needle & Dispose

- Pull the needle out at the same angle, apply light pressure with gauze (don't rub), and dispose of the syringe in a sharps container.

#### 4 Monitor for Reactions

- Mild redness or soreness is normal. Seek medical help if you experience severe pain, swelling, or an allergic reaction.

### Intramuscular Injection steps:

#### 1 Choose & Clean the Injection Site

- Use the thigh (vastus lateralis), upper arm (deltoid), or glute (ventrogluteal or dorsogluteal muscle).
  - Rotate sites to prevent soreness. Clean the area with an alcohol swab and let it dry.

#### 2 Inject

- Stretch the skin taut, hold the syringe like a dart at a 90° angle, and insert the needle quickly and smoothly. Slowly push the plunger down to inject.

#### 3 Remove the Needle & Dispose

- Pull the needle straight out, apply light pressure with gauze (don't rub), and dispose of the syringe in a sharps container.

#### 4 Monitor for Reactions

- Mild soreness or redness is normal. Seek medical help if you experience severe pain, swelling, or an allergic reaction.



## Kisspeptin Mechanism of Action

- **Hypothalamic Pituitary Gonadal (HPG) Axis Regulation:**
  - Kisspeptin is a hypothalamic neuropeptide encoded by the KISS1 gene that exerts its primary physiological role in reproductive regulation. It binds to the G-protein–coupled receptor KISS1R (GPR54), which is expressed predominantly on gonadotropin-releasing hormone (GnRH) neurons in the hypothalamus.
- **GnRH Stimulation and Gonadotropin Secretion:**
  - Activation of KISS1R initiates intracellular phospholipase C (PLC) signaling, resulting in increased intracellular  $\text{Ca}^{2+}$  and the pulsatile release of GnRH into the hypophyseal portal system. GnRH then acts on the anterior pituitary to stimulate secretion of luteinizing hormone (LH) and follicle-stimulating hormone (FSH), which regulate sex steroidogenesis (testosterone in males; estrogen and progesterone in females) and gametogenesis (spermatogenesis and oogenesis).
- **Integration of Metabolic and Reproductive Signaling:**
  - Kisspeptin serves as a key integrator of energy status and reproductive function. It interacts with leptin and insulin pathways, linking metabolic cues and energy availability to reproductive axis activation. This ensures fertility processes are synchronized with nutritional and environmental conditions.
- **Neuroendocrine and Behavioral Modulation:**
  - Beyond reproductive regulation, Kisspeptin influences neuroendocrine signaling, mood, and sexual behavior through its action on hypothalamic and limbic brain regions. These neuromodulatory effects contribute to libido, affective balance, and reproductive motivation.
- **HPG Axis Homeostasis and Stress Adaptation:**
  - Kisspeptin signaling plays a vital role in maintaining HPG axis homeostasis by modulating GnRH pulse frequency and amplitude in response to stress and hormonal feedback. This adaptive regulation supports reproductive resilience and endocrine stability across varying physiological states.