

# GHRP-2

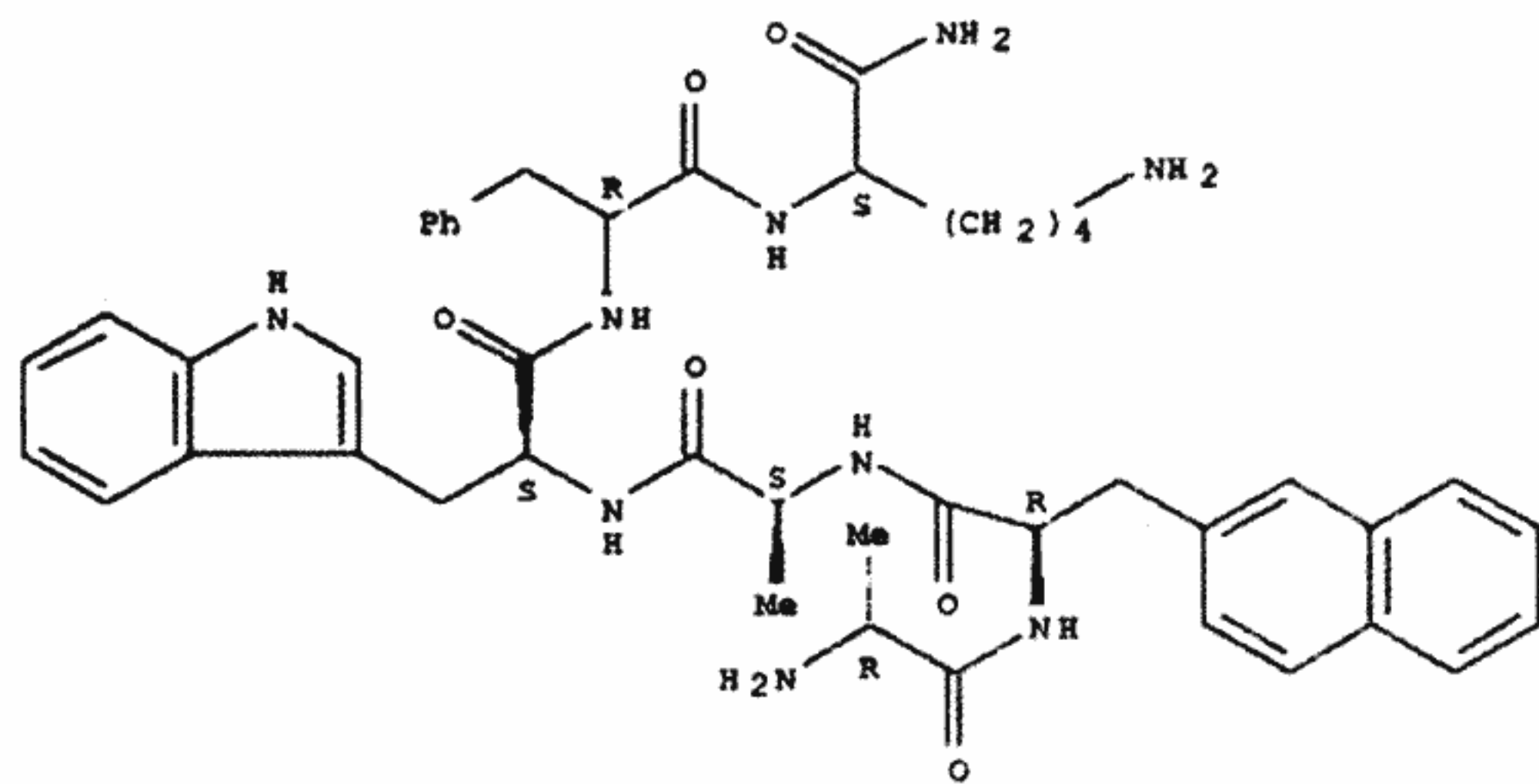
5mg/ml

*Alley*

## 1. Description

Growth Hormone Releasing Peptide-2 is a single, non-glycosylated oligopeptide chain containing 6 amino acids.

GH-releasing peptides (GHRPs) are synthetic peptides that like GHRH act directly on pituitary somatotrophs to stimulate GH release. GHRP-2, an investigational drug, is one of the most potent members of the GHRP family.



**Molecular Formula :** C<sub>45</sub>H<sub>55</sub>N<sub>9</sub>O<sub>6</sub>

**Molecular Weight :** 817.974

**CAS No.:** 158861-67-7

**Sequence:** D-Ala-D-(β-Nal)-Ala-Trp-D-Phe-Lys-NH<sub>2</sub>

**Other names:** GHRP-2 Acetate, Pralmorelin

GHRP-2 is a sterile, non-pyrogenic, white lyophilized powder intended for subcutaneous or intramuscular injection, after reconstitution with sterile Water for Injection (0,3% m-Cresol).

## 2. Mechanism of action

GHRP-2 has been widely studied for its helpfulness and action as a growth hormone secretagogue (GHS), meaning it stimulates the secretion of growth hormone. It is known to promote hunger and appetite by stimulating Ghrelin release. The best use of GHRP-2 is correcting the production of low level of growth hormone. GHRP-2 also brings about an excess weight gain in unusually lean individuals. Growth Hormone Releasing Peptide-2 (GHRP-2) works to substantially activate the pituitary gland. This causes an increase in the production of the endogenous growth hormone. Thus, this peptide works to enhance your body's own hormone which in turn brings about functionality from the natural hormone of the body without any of the adverse effects associated with synthetic growth hormone use.

GHRP-2 enhances GH production via a two-fold mechanism of action, for instance, a) it causes an increase in growth hormone via amplification of the transduction pathway of the natural growth hormone releasing hormone signal, and b) it suppresses the actions of somatostatin, thus both these pathways brings about an increase in the level of endogenous growth hormone.

## 3. GHRP-2 and GRF Analogue Interactions

It is important to know that GHRP-2 does not relate to any Growth Hormone Releasing Hormones (GHRH) peptides such as Sermorelin and CJC-1295 because it acts on different receptors. However, greater results occurred when administered in conjunction with a Growth Hormone Releasing Hormone (GHRH) such as CJC-1295 (with DAC). Naturally, these GHRP-2 peptide receptors interact with a hormone called ghrelin. Growth hormone releasing peptide -2 is a commercially synthesized, non-natural super-analog of GHRP-6 which is capable of potent stimulatory effect on growth hormone (GH) secretion with slight stimulator effect in PRL, ACTH and levels of cortisol (Arvat et al. 1997). It is also a synthetic agonist of ghrelin

lin that is binding with the growth hormone (GH) secretagogue receptor. GHRP-2 has been shown to affect and induce growth hormone secretion. The response of natural physiologic system includes increase in levels of calcium ion influx along side with increased release of growth hormones in response to this peptide (Wu et al. 1994).

## 4. Comparing GHRP-2 and GHRP-6

GHRP-2 is a 2nd generation GHRP just behind GHRP-6. Compared to GHRP-6, GHRP-2 is considered to be much more superior in terms of growth hormone stimulation because over longer periods of time it maintains maximum elevations in Growth Hormone. GHRP-2 has shown to increase IGF-1 levels (Insulinlike Growth Factor 1), and even greater results happen when used with Growth Hormone Releasing Hormone (GHRH). It has a short half-life with peak concentrations occurring around 15 minutes but not longer than 60 minutes. The response of natural physiologic system includes increase in levels of calcium ion influx alongside with increased release of growth hormones in response to the high-amplitude pulsation from the GHRP-2. GHRP-2 and other ghrelin analogues increase the number of somatotropes involved in the GH pulse by inhibiting somatostatin, GHRH increases the pulse amplitude per pituitary cell or somatotrope by other means. Unlike ghrelin, GHRP-2 is not lipogenic which means that it does not induce fat storage.

Although ghrelin plays a large role in hunger, GHRP-2 as an analog of ghrelin does not increase appetite significantly.

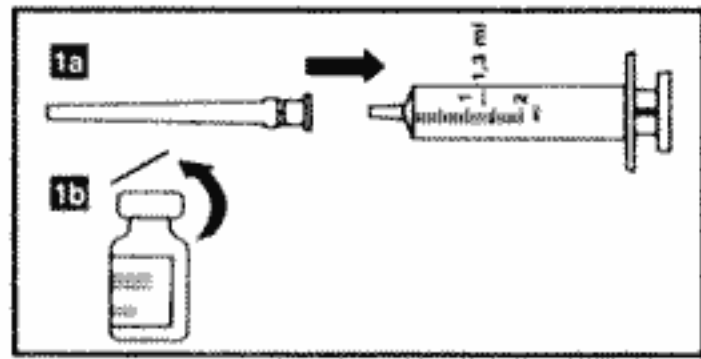
## 5. Adverse reactions

The hunger side effects tied to GHRP-2 should be duly noted. Usage of this peptide can also come with elevated levels of cortisol and prolactin, especially if users are dosing in the higher ranges – over 200mcg/injection. Another common side effect is the feeling of lethargy and tiredness upon first using GHRP-2. Water retention, tingling, numbness and decreased insulin sensitivity have also been cataloged as effects of GHRP-2. The most common positive side effect that bodybuilders and athletes will find with GHRP-2 are: decreased body fat, increase lean body mass,

improved sleep, increase in IGF-1 production, increase in bone density and increase in cellular repair. While GHRP-2 has good and bad side effects, it should also be taken into consideration that compared to GHRP-6, GHRP-2 is actually the mildest GHRP next in line to Ipamorelin.

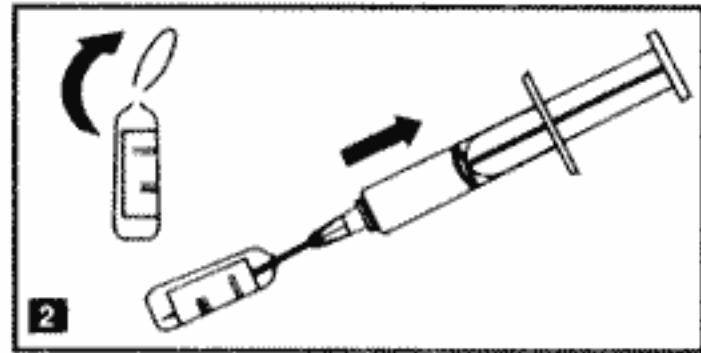
## 6. Instructions for reconstitution

Powder must be dissolved only with the solvent provided.

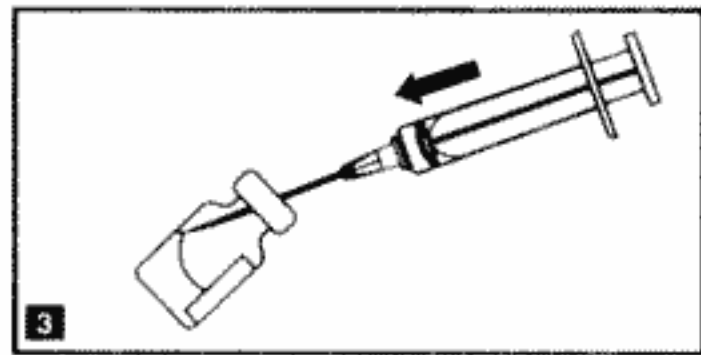


**1a. Apply the needle to the syringe**

**1b. Remove the plastic cover from the vial**



**2. Break the top of the ampoule containing the solvent. Remove the plastic cover of the needle. Make sure the needle is well applied to the syringe. Slowly absorb all the solvent.**



**3. Inject all the solvent to the vial. This will create a 5mg/ml solution. To prevent foaming, the solvent should be injected into the vial by aiming the stream of liquid against the glass wall.**



**4. Following reconstitution, the vial should be swirled with a GENTLE rotary motion until the contents are completely dissolved. DO NOT SHAKE.** The resulting solution should be clear and colorless, without particulate matter.

**After reconstitution, the vial contains 1 ml liquid and 5mg GHRP-2. That means 5000mcg/ml. For example one injection with 500mcg GHRP-2 needs 0,1ml (or 10 units on Insulin Syringe).**

## 7. Dosage

The dosage is injected 2-4 times a day. A sufficient dosage could be up to 300-500mcg. The injections are usually made subcutaneously in an abdominal area 30 minutes before or in 1-1.5 after meal. The time between injections should be 3-4 hours (in order the body has the time to produce GH for further release). Do not consume food for between 15-30 minutes after your dosage. Best time is around 20-25 minute mark. GH pulses should peak within about 10 minutes after dosage. Fats and Carbohydrates affect the pulse dramatically. Protein has no effect on pulse. However, you can have a pure protein source in your stomach at any time if choose to do so. GHRP-2 can be taken in higher dosages, if needed; however, it is still unclear how effective these high doses are.

## 8. Storage

- This product can be used not more than 3 years from the production date (see box)
- After reconstitution, may be stored for a maximum of 14 days in a refrigerator at 2°C - 8°C.
- Store vials in an upright position.
- Store in a refrigerator (2°C - 8°C). Keep in the outer carton in order to protect from light.
- For one month can be stored at room temperature.

**THIS PRODUCT IS INTENDED FOR RESEARCH PURPOSES ONLY**