



Marrow Health.

GENOMICS · PEPTIDE RESPONSE · PRECISION WELLNESS

Response to Peptides

Personalized Peptide Response Report

MENTAL HEALTH

COGNITION

INFLAMMATION & AUTOIMMUNITY

IMMUNITY & INFECTIONS

WEIGHT & BODY FAT

BLOOD SUGAR

LONGEVITY

INJURIES

SEXUAL HEALTH

REPRODUCTIVE HEALTH

FITNESS

Test Test

Report date: 26 November 2025

Genomics · Peptide Response · Precision Wellness

Marrow Health Laboratories



PATIENT & SPECIMEN INFORMATION

PATIENT NAME	DATE OF BIRTH	AGE	SEX AT BIRTH
Test Test	01/15/1985	40 yrs	Male
ADDRESS	PATIENT ID / MRN	HEIGHT	BODY WEIGHT
123 Strawberry Lane Jacksonville, FL 32256	0001234	5'11" 180 cm	185 lb 84 kg
DATE OF COLLECTION	DATE RECEIVED	DATE REPORTED	SPECIMEN TYPE
11/20/2025	11/22/2025	11/26/2025	Buccal Swab (DNA)

About This Report

This report explores how your genetic profile may influence your response to a range of therapeutic peptides — short chains of amino acids that help regulate healing, metabolism, mood, immunity, and more. For each peptide we classify how well-matched your genetics are on a three-level **optimization scale: Highly Optimal, Optimal, or Less Optimal**, based on the genetic variants we analyzed.

WHAT EACH OPTIMAL STATUS MEANS

▲ **HIGHLY OPTIMAL** Your genetics **strongly favor** a beneficial, stronger-than-average response to this peptide. You are well-matched to it and are more likely to see meaningful results at standard, provider-guided protocols. This is a peptide worth prioritizing in a discussion with your clinician.

● **OPTIMAL** Your genetics indicate a **typical, expected** response — a normal, well-matched profile. This peptide should generally work about as it does for the average person. No genetic red flags and no special genetic advantage were identified.

▼ **LESS OPTIMAL** Your genetics may **blunt or reduce** this peptide's effect, making it a less ideal match for you. It can still work, but you may benefit from adjusted dosing, a longer trial, or an alternative peptide. Discuss options with your provider before relying on it.

10

HIGHLY OPTIMAL

28

OPTIMAL

5

LESS OPTIMAL

This report covers **43 peptides** grouped into **6 categories**.

Please note: The claims in this report have not been verified by clinical research. They are hypotheses based on the known mechanisms of these peptides and on genetic variants that may modify their effectiveness. This report does not diagnose any condition and is not a substitute for medical advice. Always consult a qualified healthcare professional before starting or stopping any peptide or medication.

Results at a Glance

Every peptide analyzed, grouped by category and color-coded by your optimization status.

Cognition & Mood

▼ Semax LESS OPTIMAL	▼ Synapsin LESS OPTIMAL	• Selank OPTIMAL
• Dihexa OPTIMAL	• Cerebrolysin OPTIMAL	• Cyclo (His-Pro) OPTIMAL
• Pinealon OPTIMAL	• DSIP OPTIMAL	

Muscle Growth & Tissue Repair

• PEG-MGF OPTIMAL	• Follistatin-344 OPTIMAL	• GHRP-2 OPTIMAL
• GHRP-6 OPTIMAL	• CJC-1295 OPTIMAL	• Thymosin Beta-4 OPTIMAL
▲ BPC-157 HIGHLY OPTIMAL	▲ TB-500 HIGHLY OPTIMAL	▲ Ipamorelin HIGHLY OPTIMAL
▲ Sermorelin HIGHLY OPTIMAL		

Weight Management & Energy Metabolism

▼ GLP-1 (Ozempic) LESS OPTIMAL	• Retatrutide OPTIMAL	• Tirzepatide OPTIMAL
• 5-Amino-1MQ OPTIMAL	▲ AOD-9604 HIGHLY OPTIMAL	▲ MOTS-c HIGHLY OPTIMAL
▲ SS-31 HIGHLY OPTIMAL		

Inflammation & Immune Modulation		
▼ KPV LESS OPTIMAL	▼ Larazotide LESS OPTIMAL	• Thymosin Alpha-1 OPTIMAL
• Thymogen OPTIMAL	• Thymalin OPTIMAL	• ARA 290 OPTIMAL
• LL-37 OPTIMAL	• VIP OPTIMAL	
Sexual & Reproductive Health		
• Bremelanotide OPTIMAL	• Kisspeptin OPTIMAL	▲ Oxytocin HIGHLY OPTIMAL
▲ Melanotan II HIGHLY OPTIMAL		
Anti-Aging & Longevity		
• Epitalon OPTIMAL	• Vilon OPTIMAL	• FOXO4-DRI OPTIMAL
• Humanin OPTIMAL	• SHLPs OPTIMAL	▲ GHK-Cu HIGHLY OPTIMAL

Your Results in Detail

A closer look at each peptide: what it is, your optimization status, and how many genetic variants informed it.

Cognition & Mood

Semax

▼ LESS OPTIMAL

A nootropic peptide studied for focus, memory, and stress resilience via BDNF and dopamine pathways.

Your genetics point to a **less optimal** match — the effect of Semax may be blunted for you.

14 VARIANTS ANALYZED

Synapsin

▼ LESS OPTIMAL

A nootropic formulation targeting synaptic proteins and neurotransmitter release to support cognition.

Your genetics point to a **less optimal** match — the effect of Synapsin may be blunted for you.

21 VARIANTS ANALYZED

Selank

● OPTIMAL

An anxiolytic nootropic studied for calm focus and modulating stress and anxiety.

Your genetics point to an **optimal (typical)** response to Selank — about what the average person experiences.

9 VARIANTS ANALYZED

Dihexa

● OPTIMAL

A potent nootropic studied for synapse formation and memory via the HGF/c-Met pathway.

Your genetics point to an **optimal (typical)** response to Dihexa — about what the average person experiences.

12 VARIANTS ANALYZED

Cerebrolysin

● OPTIMAL

A neurotrophic peptide mixture studied for neuroprotection and cognitive recovery.

Your genetics point to an **optimal (typical)** response to Cerebrolysin — about what the average person experiences.

11 VARIANTS ANALYZED

Cyclo (His-Pro)

● OPTIMAL

An endogenous dipeptide involved in neuroprotection and appetite/metabolic signaling.

Your genetics point to an **optimal (typical)** response to Cyclo (His-Pro) — about what the average person experiences.

9 VARIANTS ANALYZED

Pinealon

● OPTIMAL

A short peptide bioregulator studied for neuroprotection and oxidative-stress resilience.

Your genetics point to an **optimal (typical)** response to Pinealon — about what the average person experiences.

9 VARIANTS ANALYZED

DSIP

● OPTIMAL

Delta sleep-inducing peptide, studied for sleep regulation, stress, and recovery.

Your genetics point to an **optimal (typical)** response to DSIP — about what the average person experiences.

18 VARIANTS ANALYZED

Muscle Growth & Tissue Repair

PEG-MGF

OPTIMAL

A mechano growth factor variant studied for muscle repair and satellite-cell activation.

Your genetics point to an **optimal (typical)** response to PEG-MGF — about what the average person experiences.

15 VARIANTS ANALYZED

Follistatin-344

OPTIMAL

A myostatin inhibitor studied for its muscle-growth potential.

Your genetics point to an **optimal (typical)** response to Follistatin-344 — about what the average person experiences.

9 VARIANTS ANALYZED

GHRP-2

OPTIMAL

A growth-hormone secretagogue that stimulates GH release.

Your genetics point to an **optimal (typical)** response to GHRP-2 — about what the average person experiences.

9 VARIANTS ANALYZED

GHRP-6

OPTIMAL

A growth-hormone secretagogue that stimulates GH release and appetite.

Your genetics point to an **optimal (typical)** response to GHRP-6 — about what the average person experiences.

9 VARIANTS ANALYZED

CJC-1295

OPTIMAL

A long-acting GHRH analog that raises growth hormone and IGF-1.

Your genetics point to an **optimal (typical)** response to CJC-1295 — about what the average person experiences.

10 VARIANTS ANALYZED

Thymosin Beta-4

OPTIMAL

A tissue-repair and anti-inflammatory peptide supporting healing and blood-vessel formation.

Your genetics point to an **optimal (typical)** response to Thymosin Beta-4 — about what the average person experiences.

9 VARIANTS ANALYZED

BPC-157

HIGHLY OPTIMAL

A 'body protection compound' studied for tissue, gut, and tendon healing.

Your genetics point to a **highly optimal** match — a stronger-than-average, favorable response to BPC-157.

26 VARIANTS ANALYZED

TB-500

HIGHLY OPTIMAL

A synthetic thymosin beta-4 fragment studied for recovery and tissue repair.

Your genetics point to a **highly optimal** match — a stronger-than-average, favorable response to TB-500.

26 VARIANTS ANALYZED

Ipamorelin

HIGHLY OPTIMAL

A selective GH secretagogue that releases growth hormone with minimal side effects.

Your genetics point to a **highly optimal** match — a stronger-than-average, favorable response to Ipamorelin.

39 VARIANTS ANALYZED

Sermorelin

HIGHLY OPTIMAL

A GHRH analog that stimulates the body's natural growth-hormone production.

Your genetics point to a **highly optimal** match — a stronger-than-average, favorable response to Sermorelin.

38 VARIANTS ANALYZED

Weight Management & Energy Metabolism

GLP-1 (Ozempic)

▼ LESS OPTIMAL

A GLP-1 receptor agonist (semaglutide) used for blood-sugar control and weight loss.

Your genetics point to a **less optimal** match — the effect of GLP-1 (Ozempic) may be blunted for you.

16 VARIANTS ANALYZED

Retatrutide

● OPTIMAL

A triple GLP-1/GIP/glucagon receptor agonist studied for weight loss.

Your genetics point to an **optimal (typical)** response to Retatrutide — about what the average person experiences.

9 VARIANTS ANALYZED

Tirzepatide

● OPTIMAL

A dual GIP/GLP-1 agonist used for blood-sugar control and weight loss.

Your genetics point to an **optimal (typical)** response to Tirzepatide — about what the average person experiences.

9 VARIANTS ANALYZED

5-Amino-1MQ

● OPTIMAL

An NNMT inhibitor studied for fat loss and NAD+/metabolic support.

Your genetics point to an **optimal (typical)** response to 5-Amino-1MQ — about what the average person experiences.

13 VARIANTS ANALYZED

AOD-9604

▲ HIGHLY OPTIMAL

A modified growth-hormone fragment studied for fat metabolism.

Your genetics point to a **highly optimal** match — a stronger-than-average, favorable response to AOD-9604.

22 VARIANTS ANALYZED

MOTS-c

▲ HIGHLY OPTIMAL

A mitochondrial-derived peptide studied for metabolic health and exercise capacity.

Your genetics point to a **highly optimal** match — a stronger-than-average, favorable response to MOTS-c.

24 VARIANTS ANALYZED

SS-31

▲ HIGHLY OPTIMAL

A mitochondria-targeting peptide (elamipretide) studied for cellular energy and protection.

Your genetics point to a **highly optimal** match — a stronger-than-average, favorable response to SS-31.

24 VARIANTS ANALYZED

Inflammation & Immune Modulation

KPV

▼ LESS OPTIMAL

An anti-inflammatory tripeptide (alpha-MSH fragment) studied for gut and skin inflammation.

Your genetics point to a **less optimal** match — the effect of KPV may be blunted for you.

15 VARIANTS ANALYZED

Larazotide

▼ LESS OPTIMAL

A tight-junction regulator studied for intestinal permeability ('leaky gut').

Your genetics point to a **less optimal** match — the effect of Larazotide may be blunted for you.

14 VARIANTS ANALYZED

Thymosin Alpha-1

● OPTIMAL

An immune-modulating peptide supporting T-cell function and immune balance.

Your genetics point to an **optimal (typical)** response to Thymosin Alpha-1 — about what the average person experiences.

11 VARIANTS ANALYZED

Thymogen

● OPTIMAL

A short immunomodulatory peptide supporting immune regulation.

Your genetics point to an **optimal (typical)** response to Thymogen — about what the average person experiences.

9 VARIANTS ANALYZED

Thymalin

● OPTIMAL

A thymic peptide bioregulator supporting immune and inflammatory balance.

Your genetics point to an **optimal (typical)** response to Thymalin — about what the average person experiences.

9 VARIANTS ANALYZED

ARA 290

● OPTIMAL

An EPO-derived peptide studied for nerve repair and reducing inflammation.

Your genetics point to an **optimal (typical)** response to ARA 290 — about what the average person experiences.

35 VARIANTS ANALYZED

LL-37

● OPTIMAL

An antimicrobial peptide with immune-defense and wound-healing roles.

Your genetics point to an **optimal (typical)** response to LL-37 — about what the average person experiences.

10 VARIANTS ANALYZED

VIP

● OPTIMAL

Vasoactive intestinal peptide, an anti-inflammatory and immune-regulating peptide.

Your genetics point to an **optimal (typical)** response to VIP — about what the average person experiences.

10 VARIANTS ANALYZED

Sexual & Reproductive Health

Bremelanotide

● OPTIMAL

A melanocortin agonist (PT-141) for sexual arousal and desire.

Your genetics point to an **optimal (typical)** response to Bremelanotide — about what the average person experiences.

8 VARIANTS ANALYZED

Kisspeptin

● OPTIMAL

A regulator of reproductive hormones (GnRH axis) supporting fertility and libido.

Your genetics point to an **optimal (typical)** response to Kisspeptin — about what the average person experiences.

9 VARIANTS ANALYZED

Oxytocin

▲ HIGHLY OPTIMAL

The bonding and social hormone, with roles in reproduction and connection.

Your genetics point to a **highly optimal** match — a stronger-than-average, favorable response to Oxytocin.

19 VARIANTS ANALYZED

Melanotan II

▲ HIGHLY OPTIMAL

A melanocortin agonist studied for tanning and libido effects.

Your genetics point to a **highly optimal** match — a stronger-than-average, favorable response to Melanotan II.

13 VARIANTS ANALYZED

Anti-Aging & Longevity

Epitalon

●

OPTIMAL

A pineal peptide bioregulator studied for telomere, circadian, and longevity pathways.

Your genetics point to an **optimal (typical)** response to Epitalon — about what the average person experiences.

44 VARIANTS ANALYZED

Vilon

●

OPTIMAL

A short peptide bioregulator studied for immune function and cellular aging.

Your genetics point to an **optimal (typical)** response to Vilon — about what the average person experiences.

9 VARIANTS ANALYZED

FOXO4-DRI

●

OPTIMAL

A senolytic peptide studied for clearing senescent ('zombie') cells.

Your genetics point to an **optimal (typical)** response to FOXO4-DRI — about what the average person experiences.

9 VARIANTS ANALYZED

Humanin

●

OPTIMAL

A mitochondrial-derived peptide studied for cell protection and longevity.

Your genetics point to an **optimal (typical)** response to Humanin — about what the average person experiences.

23 VARIANTS ANALYZED

SHLPs

●

OPTIMAL

Small humanin-like peptides, studied for metabolism and longevity.

Your genetics point to an **optimal (typical)** response to SHLPs — about what the average person experiences.

9 VARIANTS ANALYZED

GHK-Cu

▲

HIGHLY OPTIMAL

A copper peptide studied for skin repair, collagen production, and regeneration.

Your genetics point to a **highly optimal** match — a stronger-than-average, favorable response to GHK-Cu.

17 VARIANTS ANALYZED

Methodology & Disclaimer

For each peptide, we examined genetic variants (SNPs) in genes tied to that peptide's known biological pathways — for example, neurotrophic and neurotransmitter genes for cognitive peptides, or growth-factor and tissue-repair genes for healing peptides. Your combination of genotypes across those variants produces an overall optimization status of **Highly Optimal**, **Optimal**, or **Less Optimal**.

Important: These results are hypotheses grounded in peptide mechanisms and genetics, not verified clinical outcomes. Individual response also depends on dose, formulation, lifestyle, and overall health. Nothing here diagnoses a condition or replaces professional medical guidance. Talk to your healthcare provider before making decisions about peptide therapy.

Prepared by Marrow Health Laboratories — Genomics · Peptide Response · Precision Wellness.