

THE GHK-Cu COMPLETE RESEARCH PROTOCOL

The GHK-Cu Complete Research Protocol

Dosing, Reconstitution, and the Glow and KLOW Stacks

Evidence-based peptide science from Peptide Hub

peptidehub.bio

For research and educational purposes only. Not medical advice. Consult a qualified healthcare professional before any peptide protocol. Copyright 2026 Peptide Hub -- peptidehub.bio

What is GHK-Cu?

GHK-Cu (glycyl-L-histidyl-L-lysine copper) is a naturally occurring copper-binding tripeptide found in human plasma, saliva, and urine. Its plasma concentration declines from approximately 200 ng/mL at age 20 to 80 ng/mL by age 60 -- a 60% decline that parallels the deterioration in wound healing, skin elasticity, and structural tissue maintenance over the same period.

GHK-Cu activates approximately 31% of human tissue remodeling genes. It is the fastest-growing peptide search term of 2026, up over 1,000% year-over-year, with research interest spanning dermatology, hair restoration, wound healing, and longevity applications.

Key Research Applications

- + **Skin regeneration:** Collagen and elastin synthesis upregulation, fine line reduction, skin laxity improvement, TGF-beta modulation to reduce fibrosis
- + **Hair research:** Promotes hair follicle size, extends anagen phase, androgenic alopecia protocols, 5-alpha reductase inhibition
- + **Wound healing:** Accelerated re-epithelialization, reduced scar formation, angiogenesis via VEGF upregulation
- + **Tissue repair:** Activates approximately 31% of tissue remodeling genes including collagen I, III, and VI upregulation
- + **Longevity research:** Antioxidant enzyme upregulation (SOD), anti-inflammatory gene modulation, extracellular matrix restoration

2026 Trend: GHK-Cu is up 1,000%+ year-over-year in search volume -- the fastest-growing peptide in the research space.

Step-by-Step Reconstitution Protocol

Vial Specifications

Vial Size	BAC Water	Concentration	Storage After Reconstitution
50mg	2 ml	25 mg/ml (25,000 mcg/ml)	Refrigerate 2-4 degrees C immediately. Protect from light.
75mg	3 ml	25 mg/ml (25,000 mcg/ml)	Refrigerate 2-4 degrees C immediately. Protect from light.

Reconstitution Steps

- Step 1** Gather supplies -- GHK-Cu vial, bacteriostatic water (BAC water), two insulin syringes (28-31 gauge, 0.5 inch), two alcohol swabs, and a clean flat surface.
- Step 2** Swab both vial tops with separate alcohol swabs. Allow to air dry 10-15 seconds. Do not touch the swabbed rubber surface after cleaning.
- Step 3** Draw the required BAC water volume into a clean insulin syringe: 2ml for a 50mg vial or 3ml for a 75mg vial.
- Step 4** Insert needle into the GHK-Cu vial at a slight angle. Inject BAC water SLOWLY down the inside glass wall of the vial -- never directly onto the powder cake. Wall-directed slow injection prevents peptide denaturation.
- Step 5** Remove needle. Swirl gently in a circular motion until powder fully dissolves. The solution should be completely clear and colorless. Do NOT shake.
- Step 6** Visual inspection -- hold vial to light. Solution must be clear with no floating particles. Cloudiness or visible particles indicate a problem; discard the vial.
- Step 7** Refrigerate at 2-4 degrees C (35-39 degrees F) immediately after reconstitution. Keep upright, away from light and door fluctuations. Use within 28-60 days.

WARNING -- Never inject BAC water directly onto the powder cake. Always inject slowly down the inside glass wall. Never shake the vial -- swirl gently only.

Dosing Protocol and Calculations

GHK-Cu Dosing Specifications

Parameter	Value
Recommended dose	1mg to 2mg per administration
Units on syringe at 25mg/ml concentration	4 units = 1mg 8 units = 2mg
Frequency	Daily
Cycle length	30 days on / 14 days off
Injection type	Subcutaneous (SubQ)
Injection sites	Abdomen, thigh, or lateral hip
Timing	Morning or early afternoon preferred
Storage after reconstitution	Refrigerate 2-4 degrees C, use within 28-60 days

Dose Calculation Formula

Formula:	$\text{Units} = (\text{Target dose in mcg} / \text{Concentration in mcg/ml}) \times 100$
1mg dose:	$1,000 \text{ mcg} / 25,000 \text{ mcg/ml} \times 100 = 4 \text{ units on insulin syringe}$
2mg dose:	$2,000 \text{ mcg} / 25,000 \text{ mcg/ml} \times 100 = 8 \text{ units on insulin syringe}$

Use the interactive dose calculator at peptidehub.bio/peptides/ghk-cu for automatic unit calculations based on your target dose.

The Glow Stack

GHK-Cu + BPC-157 + TB-500

The Glow Blend combines GHK-Cu (27mg), BPC-157 (5mg), and TB-500 (10mg) -- targeting skin regeneration, tissue repair, and hair research through three complementary mechanisms with no overlap. GHK-Cu activates tissue remodeling genes. BPC-157 drives VEGFR2-mediated angiogenesis. TB-500 drives G-actin sequestration enabling rapid cell migration into repair sites.

Compound	Mechanism	Dose
GHK-Cu	Gene expression activation (31% of remodeling genes) Collagen and elastin synthesis upregulation	27mg
BPC-157	VEGFR2-driven angiogenesis + ERK1/2 endothelial repair GH receptor upregulation in fibroblasts	5mg
TB-500	G-actin sequestration enabling rapid cell migration Wnt/beta-catenin pathway activation (confirmed 2024)	10mg
TOTAL	Three complementary non-overlapping mechanisms	42mg

Protocol: 900mcg to 1,800mcg subcutaneous daily. 30-day cycles with 14-day break. Reconstitute with 2ml BAC water.

Full research profile + dose calculator: peptidehub.bio/peptides/wolverine-blend

The KLOW Stack

GHK-Cu + KPV + BPC-157 + TB-500

The KLOW Blend adds KPV (a tripeptide fragment of alpha-MSH) to the Glow trio -- creating a four-compound stack that adds melanocortin receptor-mediated anti-inflammatory and mucosal barrier coverage that the Glow Stack does not have. Use KLOW when anti-inflammatory pathway modulation or mucosal research is a co-priority alongside skin and tissue regeneration.

Compound	Mechanism	Dose
GHK-Cu	Gene expression activation (31% of remodeling genes) Collagen and elastin synthesis -- dominant at 62.5% of total vial	50mg
KPV	Melanocortin receptor (MC1R/MC3R) agonism NF-kB suppression + mucosal barrier repair -- the differentiating addition vs Glow	10mg
BPC-157	VEGFR2 angiogenesis + ERK1/2 endothelial repair GH receptor upregulation in fibroblasts	10mg
TB-500	G-actin sequestration + cell migration + anti-fibrotic Wnt/beta-catenin pathway activation (2024)	10mg
TOTAL	Four complementary non-overlapping mechanisms	80mg

KLOW vs Glow -- At a Glance

	Glow Stack	KLOW Stack
Total vial size	42mg	80mg
GHK-Cu dose	27mg	50mg
KPV included	No	Yes
Anti-inflammatory coverage	No	Yes -- melanocortin receptor
Best for	Pure skin + tissue repair	Skin + anti-inflammatory + mucosal

Protocol: 1mg to 2mg subcutaneous daily. 30 days on / 14 days off. Reconstitute 80mg vial with 3ml BAC water (26.7mg/ml).

Full research profile + dose calculator: peptidehub.bio/peptides/klow-blend

More Research Resources at Peptide Hub

+ 95 research peptides + interactive dose calculators	peptidehub.bio/database
+ Complete dosing and reconstitution guide	peptidehub.bio/dosing-guide
+ 113-term peptide science glossary	peptidehub.bio/glossary
+ The Journal -- evidence-based research articles	peptidehub.bio/journal
+ Pepe -- AI peptide expert on every page	peptidehub.bio

This guide is for research and educational purposes only. It does not constitute medical advice. All compounds discussed are research peptides not approved for human therapeutic use except where specifically noted. Consult a qualified healthcare professional before any peptide protocol.

Copyright 2026 Peptide Hub -- peptidehub.bio