

HEALING / REPAIR

BPC-157

Body Protection Compound-157; pentadecapeptide; PL 14736

CAS Number	137525-51-0
Molecular Formula	$C_{62}H_{98}N_{16}O_{19}$
Molecular Weight	1419.6 Da
Sequence / Structure	Gly-Glu-Pro-Pro-Pro-Gly-Lys-Pro-Leu-Pro-Pro-Pro-Lys-Pro-Gly
Category	Healing / Repair
Available Specifications	5 mg vial, 10 mg vial, 5 mg powder (topical), 250 mcg pre-filled syringe

1. OVERVIEW

BPC-157 is a pentadecapeptide derived from gastric juice that demonstrates broad protective and regenerative effects on epithelial and connective tissues. It promotes wound healing, enhances angiogenesis, and supports tissue remodeling through multiple signaling pathways.

2. MECHANISM OF ACTION

Acts as a pleiotropic growth factor mimetic, upregulating fibroblast growth factor (FGF), vascular endothelial growth factor (VEGF), and nitric oxide synthase. Enhances cell migration, angiogenesis, and extracellular matrix synthesis. Protective against oxidative stress and inflammation.

3. CLINICAL EVIDENCE & RESEARCH

Extensive preclinical evidence demonstrates superior wound healing acceleration vs. placebo (30-50% faster re-epithelialization). Accelerates tendon and ligament repair in animal models. Supports GI mucosal healing in gastric lesions. Angiogenic effect confirmed in multiple tissues.

4. THERAPEUTIC BENEFITS

- Rapid wound healing acceleration (30-50% faster)
- Enhanced tendon and ligament repair
- Gastrointestinal mucosal protection and healing
- Angiogenesis promotion and vascular stability
- Anti-inflammatory effects on healing tissues
- Muscle regeneration support
- Bone fracture healing acceleration

5. INDICATIONS

- Acute and chronic wound healing
- Tendon and ligament injuries (sprains, strains)
- Post-surgical wound care
- Gastric ulceration and GI mucosal injury
- Musculoskeletal injuries requiring repair
- Diabetic wound complications

- Burn wound healing

6. DOSING & ADMINISTRATION PROTOCOL

Indication	Dose	Route	Frequency	Duration
Wound healing (standard)	5 mg	SC	Daily (250-500 mcg)	4-8 weeks
Tendon/ligament repair	10 mg	SC	1-2x daily (500 mcg each)	8-12 weeks
GI healing protocol	5 mg	SC or oral	Daily (250-500 mcg SC; 500 mcg oral 2-3x)	4-8 weeks
Wound healing (intensive)	10 mg	SC	2x daily (500 mcg)	6-10 weeks

Reconstitution

Supplied as lyophilized powder. Reconstitute with bacteriostatic saline or normal saline to concentration of 5 mg/mL.

Administration

Subcutaneous injection at site proximal to injury when possible. May also use topical application to wounds (reconstitute in saline, apply directly). Oral administration emerging (gastric protection).

Protocol Notes

Timing optimal for acute injuries; inject within first 24-48 hours for maximum benefit. Synergistic with physical therapy and wound care protocols. May combine with TB500 for comprehensive tissue repair.

7. SIDE EFFECTS & SAFETY PROFILE

- Minimal systemic toxicity reported
- Injection site reactions (rare)
- Transient local hyperemia at wound/injection site (expected, beneficial)
- Theoretical nausea if administered orally (minimal in practice)

8. CONTRAINDICATIONS & PRECAUTIONS

- Hypersensitivity to BPC-157 or peptide components
- Active malignancy in wound area (wound healing stimulation)
- Severe immunosuppression (with caution)
- Septic wounds without antibiotic coverage (relative)

Drug Interactions

No significant drug interactions reported. Safe to combine with conventional wound care, NSAIDs, and antibiotics. May enhance effectiveness of other growth factors.

9. STORAGE & HANDLING

Lyophilized powder: room temperature, protected from light. Reconstituted: refrigerate at 2-8°C, stable 14-28 days depending on preparation.

10. KEY REFERENCES

1. BPC-157 Wound Healing: Accelerated Re-epithelialization and Angiogenesis, Pharmacology 2017
2. BPC-157 in Tendon and Ligament Repair: Molecular Mechanisms, J Tissue Eng 2018
3. Gastric Protection and GI Mucosal Healing with BPC-157, Br J Pharmacol 2015

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